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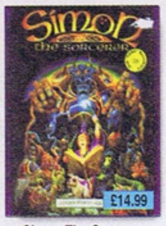
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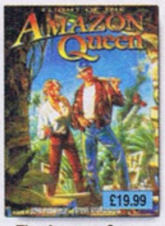
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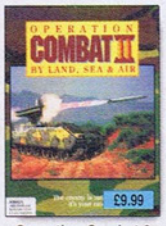
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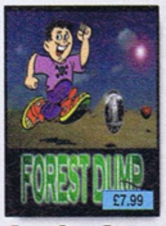
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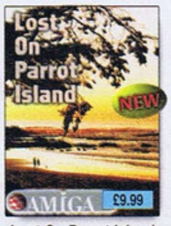
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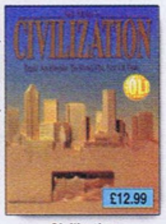
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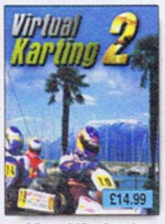
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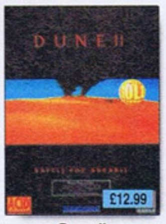
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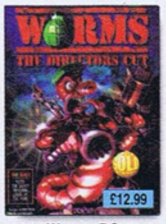
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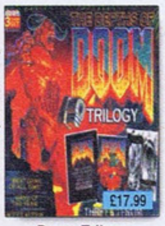
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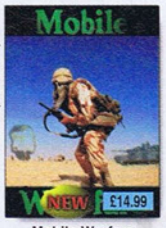
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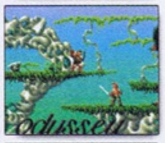


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Roadkill AGA	£4.99
Roadkill CD32	£9.99
Virtual Karting 2 AGA	£14.99
Virtual Karting 2 CD	£14.99
Flyin High CD	£14.99
Flyin High Data	£7.99
Flyin High Data 2	£7.99
Virtual GP (Alien F1)	£19.99
PUZZLE / LOGICAL	
Marbleous	£4.99
Blockhead	£7.99
Logical	£4.99
Blockhead 2	£7.99
Minskies	£8.99
Fools Errand	£9.99
Lemmings	£8.99
Worms Directors Cut	£12.99
Troddlers	£9.99
Clockwiser CD32	£2.99
Last Ninja 3 CD32	£2.99
Golem CD	£call
STRATEGIC / MANAGMENT	
Theme Park	£12.99
Theme Park AGA	£12.99
Ultimate Theme Park CD	£12.99
Cygnus 8	£14.99
Dune II	£12.99
A-Train	£9.99
Cannon Fodder (oem)	£8.99
Cannon Fodder CD32	£4.99
Cannon Fodder 2	£8.99
SimCity (oem)	£2.99
Gnome Alone	£2.99
Foundation CD	£27.99
Civilization	£12.99
Civilization CD	£12.99
Colonization	£12.99
Fields Of Glory	£12.99
Fields Of Glory CD32	£12.99
Mobile Warfare	£14.99
Uropa 2 CD	£27.99
Final Odyssey CD	£27.99
Operation Combat 2	£9.99
Medievil Warriors	£9.99
Railroad Tycoon	£12.99
Silent Service 2	£12.99
UFO : Enemy Unknown	£12.99
Special Forces	£8.99
Napalm CD	£29.99
Z CD	£29.99
Frontier : Elite II (call for availability)	£10.00
3D "DOOM" STYLE GAMES	
Testament AGA	£14.99
Death Mask	£4.99
Gloom Deluxe AGA	£4.99
Ultimate Gloom (Gloom3) CD	£12.99
Quake CD	£29.99
Doom Trilogy (3 cd's)	£17.99
Genetic Species CD	£27.99
Nemac IV CD	£19.99
Zombie Massacre CD	£19.99
Fears AGA	£4.99
Fears CD32	£9.99
Breathless AGA	£14.99
SPORTS	
PGA Tour Golf	£8.99
PGA Tour Golf Plus	£12.99
FIFA Soccer	£8.99
World Golf	£9.99
Battle Of The Ashes	£9.99
Samba World Cup CD	£19.99
Eat The Whistle	£14.99
Eat The Whistle CD	£14.99
Tennis Cup 2	£4.99
KickOff2 Data Disks (All 4 titles)	£7.99
Speedball	£4.99
Nick Faldo's Golf	£4.99
Player Manager 2 AGA	Now £9.99
Sensible Golf	£8.99
SWOS: WorldCup Update	£4.99
SWOS: 97/98 Updater	£4.99
Tracksuit Manager 2	£14.99
Tracksuit Manager 2 AGA	£14.99
John Barnes Football CD32	£2.99
International Karate Plus CD32	£2.99
Football Glory	£4.99
Club Football	£4.99
Super League Manager CD32	£2.99
Sporting Spectacular (4games)	£12.99
PINBALL SIMULATIONS	
Pinball Brain Damage AGA	£14.99
Pinball Brain Damage CD	£14.99
Pinball Illusions AGA	£7.99
Pinball Fantasies AGA	£7.99
Pinball Dreams	£7.99
Pinball Obsessions	£7.99
Slam Tilt AGA	£14.99
Thomas' Pinball AGA	£7.99
Pinball Mania AGA	£7.99

"Sixth Sense Investigations" is a new graphics adventure for the Amiga, based on the classic LucasArts style games. The base storyboard tells of a crazy young guy who has the ability to communicate with the spirit of a sarcastic man. A friend, who thinks of himself as a detective, profits from the psychic abilities of his friend (the psychic guy), by using his skills to solve the most bizarre problems of the rich.
Available on:
AGA Amiga CD / CD32 and Disk.
Requires 2mb ram, 4mb for speech.
Special Price: £19.99





"THE BEST AMIGA GAME EVER"
Three Worlds - With 30 huge locations.
Full spoken dialogue on the CD Version.
Superb 256 Colour Cartoon Graphics.
50 frame/second animations throughout.
Full animated intro. sequence on CD.
Load and save at any point in the game.
Hundreds of items to pickup and use.
Massively complex enigmas.
Month's of Gameplay. The biggest Graphics Adventure ever.

Month In View

New Workbench, new games, new graphics cards – Nick Veitch gives you all the news from an exciting month…

This month there has been some good news and some bad news. The bad news is that the "November" boxes have been delayed and now look like being "February" boxes. The good news is that according to Amiga Inc.,this delay won't effect the final release date of the new Amiga, which is still planned for later next year.

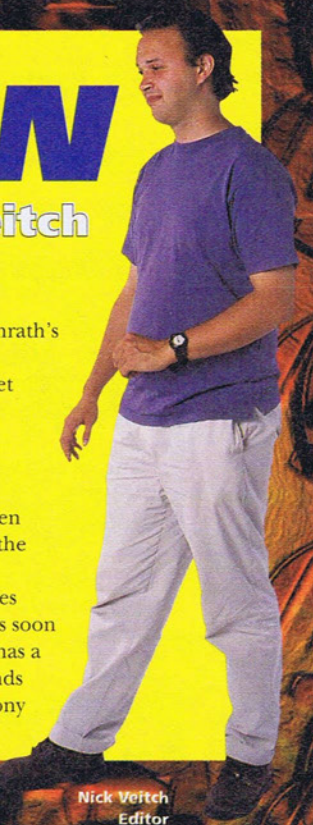
Even more good news is that the reason for the delay is so a new version of Workbench can be released in the interim. I won't give you all the details here as hopefully Amiga Inc. will have got their act together enough to send us more details for our news pages which, as always, are right at the front of the mag.

It seems that yet again we have been quite timely with our main feature this month, which is about, er, Workbench 3.5. We just wanted to put the record straight on what the consensus of user opinion was, regarding just what would be included in this new version, and you can read all about our thoughts on page 18.

Not all the exciting things this issue are about Amiga Inc. though. I was very surprised by the release of Carl Sassenrath's *REBOL*, which looks rather good. We will, of course, be following up on this, but you can get the main details from our news pages.

What we have got for you this month in terms of reviews are two of the most eagerly-awaited graphics devices of the moment, the Paloma for PicassoIV and the Permedia 2-driven CybervisionPPC. Both get the full workout in the Seriously Amiga section of the magazine.

Things are getting interesting on the games front too. *Napalm* is due to ship pretty much as soon as you get this mag, and our previews section has a load of games you'll be aching to get your hands on soon. Oh, and don't forget to check out Tony Horgan's new tutorial…



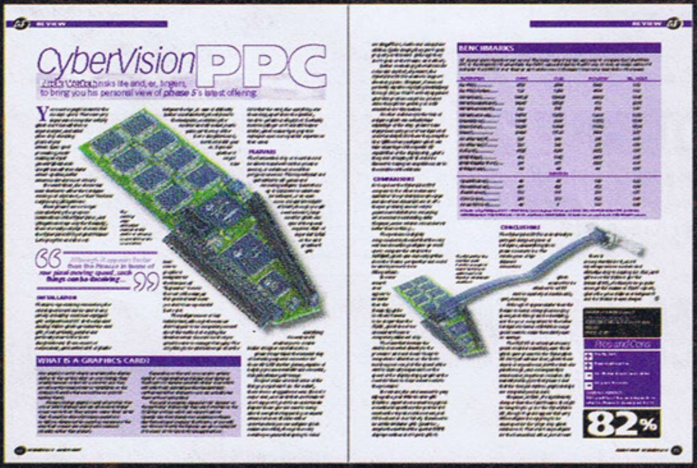
Nick Veitch
Editor



WORKBENCH 3.5 PAGE 18
As a new version of Workbench looms, we take a look at what everyone reckons should be in it, and what should definitely be left out.



COLOGNE PREVIEW PAGE 24
This is the show of shows in the Amiga world, so we're looking at what will be awaiting you if you're going, or what you'll be missing if you're not.



CYBERVISION PPC PAGE 52
It's cunningly designed, fairly priced and promises to be fast. What can we possibly find wrong with the CybervisionPPC?

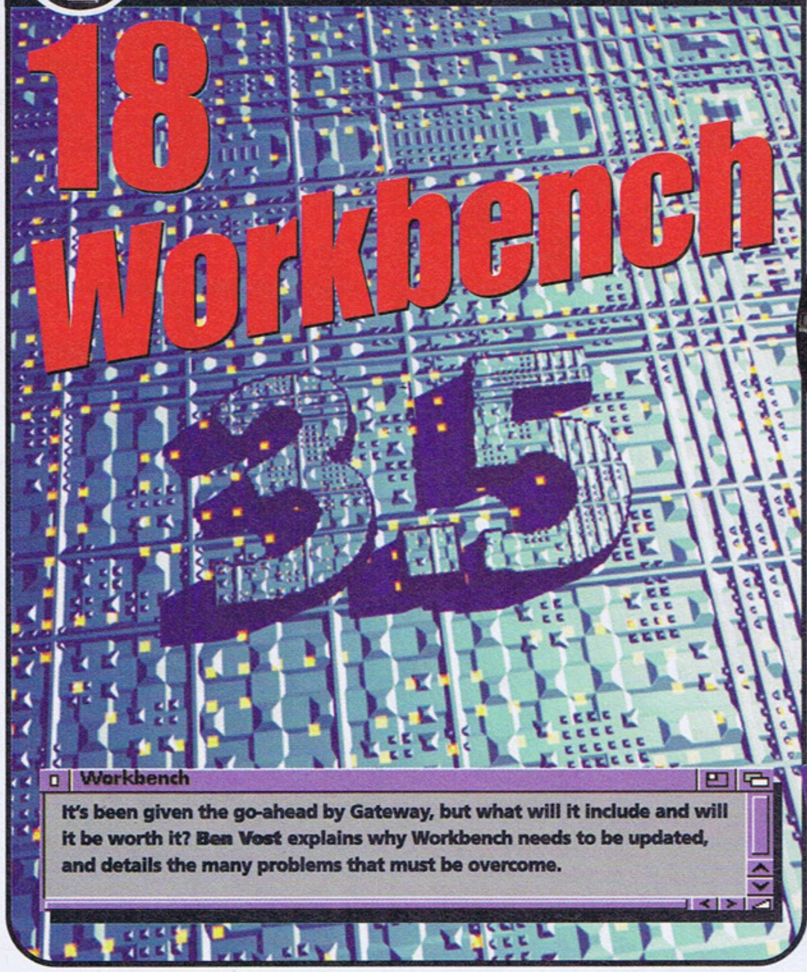


SOUND ADVICE TUTORIAL PAGE 76
If you're addicted to Amiga audio to the extent that you want to create your own sounds, Tony Horgan's new tutorial is just for you.

AMIGA FORMAT Contents

ISSUE 117 **DECEMBER 1998**

COVER STORY



18 Workbench 3.5

It's been given the go-ahead by Gateway, but what will it include and will it be worth it? **Ben Vost** explains why Workbench needs to be updated, and details the many problems that must be overcome.

CD-ROMS

96 AFCD33

Another packed disc, featuring such goodies as *Quake* add-ons and speed ups, a new *Napalm* demo, HD installers...



COVERDISKS

92 FIASCO

The latest version of this highly versatile database program.



GUNBEE F-99

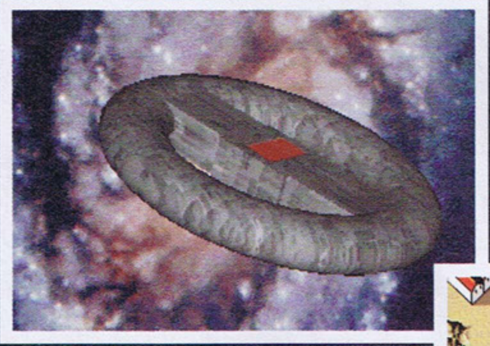
The latest version of this renamed and revamped bee-based shoot-em-up.

24 COLOGNE PREVIEW

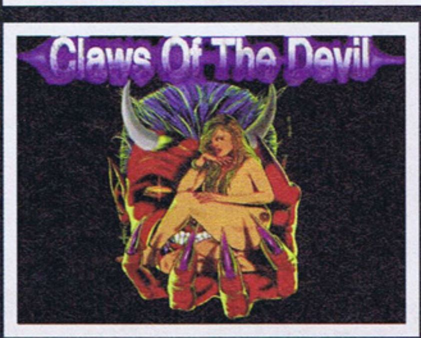
We give you a quick preview of what the big names in the Amiga market are likely to be showing, selling and saying.



Claws of the Devil is shaping up to be one of the software hits of the show.









A selection of the games that are going to be exciting your Amiga very soon. All the details are in this month's ScreenPlay.

SCREENPLAY



WHAT'S UP?

REBOL available
The Amiga version of Carl Sassenrath's *REBOL* has been released on the net.

Amiga *WipeOut 2097*
Psygnosis' title to come to the Amiga.

World show reports
All the news and rumours from Amiga shows in Italy, Belgium and the USA.

WORLD NEWS

With a REBOL yell!

The Amiga executable of Carl Sassenrath's *REBOL* is now available for free download or purchase at the main *REBOL* website. It follows hot on the heels of the release of versions for the Macintosh, Windows PCs and the various shades of Linux.

The *REBOL* project was started by the long-time Amiga guru and author of much of the original AmigaOS, Carl Sassenrath, after he parted company with one-time Amiga almost-owners, Viscorp. With a background that also includes work on the CDTV and a stint at Hewlett-Packard, Sassenrath has considerable experience in the computer industry.

REBOL was born of Sassenrath's vision of a way of using computers simply and easily, no matter what the actual hardware and operating system were, without having to learn a complicated new language.

The executable *REBOL* core is pretty simple to understand and yet it's very powerful. Written for the Internet age, it is very adept at handling data in a variety of forms. A powerful set of DataType structures are already defined, making it easy to handle date, currency and even email messages.

However, instead of being complicated, like some other "high level" languages, *REBOL* seems very intuitive and easy to follow. It is probably most like a combination of the functionality of ARexx and Lisp, but easier to use than either. Consider the following example:

```
data: read http://www.amiga.org
send jk sticky.net data
```

How's that for downloading a live page of HTML from the net and then emailing it to someone?

Because *REBOL* is available on a number of different platforms, exchanging data and information will be completely transparent, no matter who you send it to.

> "The REBOL language provides a revolutionary, simple way to model the exchange and flow of information…"

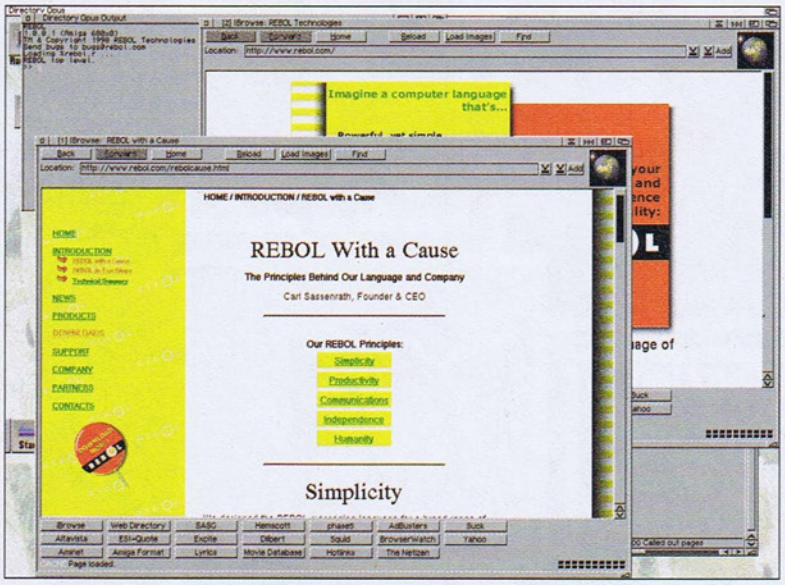
Although there may well be a lot of work still to be done on *REBOL*, it is easy to see from the current core release how powerful a tool it is. One of the people quick to realise the potential of Carl's work is Rick Snyder, former president of the PC manufacturer Gateway 2000. Snyder's new business, Avalon Investments, is a technology investor which is now backing REBOL Technologies. As Snyder explains:

"When I was the president of Gateway 2000, I saw first hand how the complexity of building network-based applications seriously challenged both developers and corporations. That's why we made REBOL Technologies one of Avalon's first major venture capital investments. The *REBOL* language provides a revolutionary, simple way to model the exchange and flow of information in today's multi-faceted, distributed environments.

"*REBOL* truly speaks the language of the Internet, of developers, and of enterprise-wide communications."

REBOL v1.0 is now available for download from http://www.rebol.com and you can also order the printed manual and disk version online for only $29.95.

We will be reviewing *REBOL* in a future issue.



The titchy Amiga executable is pretty powerful and is backed up by docs on the website.

DOWNLOAD NOW! REBOL



WipeOut 2097 for Amiga

Digital Images, the people who are writing *Space Station 3000* (and who have a WIP for it on page 42), have announced that they will be creating an official conversion of Psygnosis' headline game, *Wipeout 2097*, for the Amiga.

In a deal signed with Psygnosis recently, they stated their intentions to convert the game for our platform, but users with a less than stellar Amiga should not expect to be able to play it. At the moment, Digital Images are working on a version that will only work on Amigas with PPC and graphics cards, although they may try to cut it down to make it playable on a 68K machine too.

Digital Images plan to have the game available by the end of January next year. You can get more information by going to the Digital Images website at: http://www.digitalimages.demon.co.uk

World of Amiga 1999 announced

Although there have been no confirmed dates at the time of going to press, a new World of Amiga show has been announced for 1999, and it will probably be based at the usual venue, the Novotel in Hammersmith, London, in the spring.

Since it's still early days for the show, we have no details of who should be exhibiting at Britain's only Amiga event, but we'll let you know the news as soon as we have it. In the meantime, you can email the organisers at: pbrameld@ukonline.co.uk or visit the website at http://www.fortunecity.com/tattooine/carpenter/241/woa99.htm

Confusion reigns

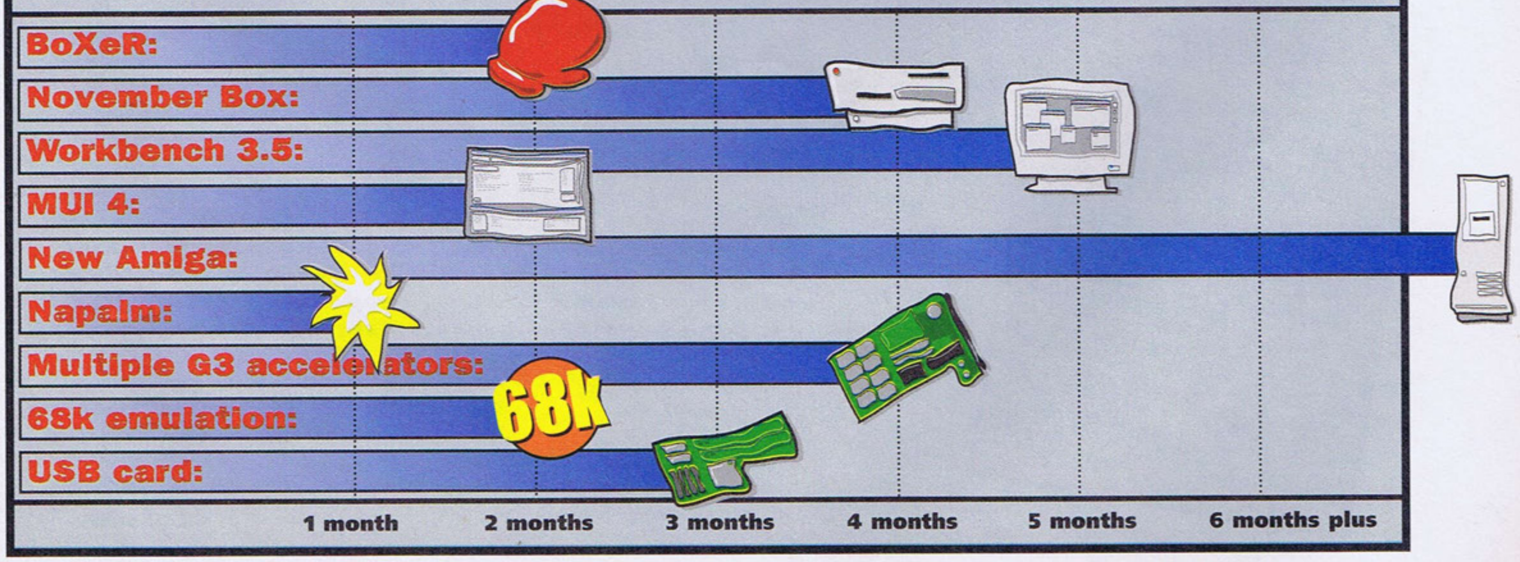
Apologies to Kickstart, who we got mixed up with SEAL last month, owing to a technical problem (Ben being dim – Ed). They are, in fact, two completely separate organisations and you can contact them both. Here are the (now separated) details:

Kickstart: Rob Gilbert (gilbie@arrakis.u-net.com) ☎ 01932 562354.

SEAL: Mick Sutton (seal@thunder.u-net.com) ☎ 01268 761429.

Estimated Time of Arrival

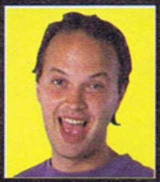
Based upon scurrilous rumours from industry insiders, *Amiga Format* present a hardly-comprehensive list of new things and when you can expect to see them in AF. As ever, if you have news of a product that you'd like to tell us about get in contact.



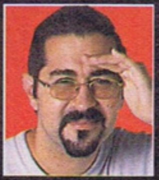
Continued overleaf ➡

Talking heads

What have the Amiga Format staff been doing this month?



Nick Veitch
Editor
I'm still reading *Washing the Spears*, I'm afraid, but I might have to take a break to read all the *REBOL* documentation, which looks like it will be just as informative and interesting.



Ben Vost
Dep. Editor
Working until very late on a top-secret project has made me realise how platform-specific HTML really is, and how rubbish Netscape and IE are, but other than that, I've been fine, thanks.



Mark Wheatley
Prod. Editor
I've been having fascinating discussions on the relative merits of cheese, sausages on sticks and jelly, in between giving up the guitar and whingeing about everything.



Colin Nightingale
Art Editor
My brain is at the final stages of meltdown as I'm writing this piece, so I can console myself with the fact that I'm going on holiday as soon as I can fill up this last little gap... hmm, that's about it.

Eyetech in one-off Internet deal

Those Yorkshire-based Amiga fans, Eyetech, have come up with some bundles to celebrate the launch of BT's new HomeHighway service, offering ISDN connections at a fraction of the price they used to be at. They have four packages, as follows:

Inet1 package
External 64/128 ISDN terminal adaptor by Zoom (the world's second largest modem manufacturer) and serial cable. Internet access with: ■ 25Mb web space ■ 10 email addresses ■ ISDN 128Kb access (+usual analogue dialup) ■ 100% local 0845 number access ■ Unlimited usage ■ 24-hour technical (Internet) support ■ No monthly access charges ever ■ One-off price of £199.95 inc. VAT.

Inet2 package
As Inet1 package, plus PortJnr 460Kb interface, one-off price of £229.95.

Inet3 package
As Inet1 package, plus *IBrowse 1.22, Miami 3.x* TCP stack, one-off price of £249.95.

Inet4 package
As Inet1 package, plus *IBrowse 1.22, Miami 3.x* TCP stack, PortJnr 460Kb interface, one-off price of £269.95.

Give Eyetech a call on 01642 713185 to find out further details or to order these new packs.

AFB report

It seems that people out there are keen on our news service. Our *AFB*, the *Amiga Format Bulletin*, is growing daily, with over five hundred subscribers at the time of writing this report. In case you weren't here last issue, I'll explain again that *AFB* comes out every four weeks (or more often if there's a breaking story) and gives you details about what's in the upcoming issue, and any news stories or rumours that didn't get into the magazine.

There are competitions, surveys and feedback requests to integrate the users and readers of *Amiga Format* better into the magazine.

If you'd like to join up, simply send an email to: af-bulletinrequest@futurenet.co.uk with "subscribe af-bulletin" in the body of your message.

100 Issues ago

AF17 December 1990

AMIGA FORMAT



We look at what was going on in the Amiga market 100 issues of *AF* ago…

■ Cover feature: Colour revolution. A sneak peek at the Amiga's first 24-bit colour display device (in PAL at least), the Harlequin from Amiga Centre Scotland, and a review of the original *Art Department*. There was also a feature on the various historical re-enactment games available.

■ On the disks: A demo of *Ultimate Ride*, a motorbike racing sim, a demo of *Personal Finance Manager* and *RealThings Humans*, along with a bunch of other stuff.

■ News: A1500 to be launched – basically a reboxed A2000 with 1084S and two floppy drives, it cost £1,149.95 inc. VAT at launch. The Mk II Action Replay is to be launched and can be used in an A2000 with the addition of a £10 adaptor. There was also a voucher for 50p off entrance to the *Computer Shopper* Show '90.

■ Prices: Digiview Gold, a slow-scan video digitiser, was on sale for £149.95, while the Harlequin board that was the subject of the cover feature came in at less than two grand for what was basically just a frame store – you couldn't work on a 24-bit screen except in specially-written software like *TV Paint*, which wasn't yet available.

■ Games reviewed included: *Betrayal* by Rainbird (84%), *Mean Streets* by US Gold (88%), *Super Off Road Racer* by Virgin (80%), *Indianapolis 500* by EA (92%), *Cadaver* by ImageWorks (83%), *Killing Game Show* by Psygnosis (92%).

■ Serious products reviewed: hard drives (from various manufacturers, including GVP, IVS, ICD and Xetec. Oh yes, and Commodore with the A590), GST Gold Genlock, *Title Page*, a word pro comparison, *Personal Finance Manager*, *Hyperchord* and *Pixound*.

■ Notes: Not very Christmassy for a December issue. Even though the A3000 was available, everyone was still using Workbench 1.3.

■ Pages: 284 ■ Cost: £2.95

GoldEd hits 5!

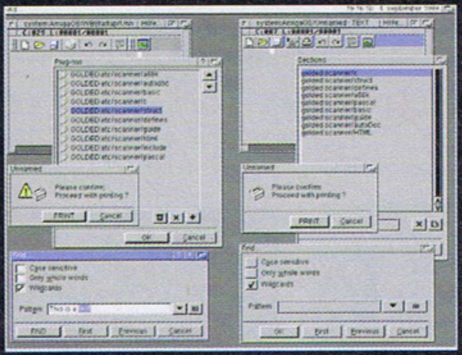
The popular Shareware text editor *Gold Ed* has hit version 5 and it's gone commercial. The new version, which comes on CD, has a lot of the previous add-ons built-in now, including support for the major programming languages, HTML and a spelling checker (for English and German) and a thesaurus.

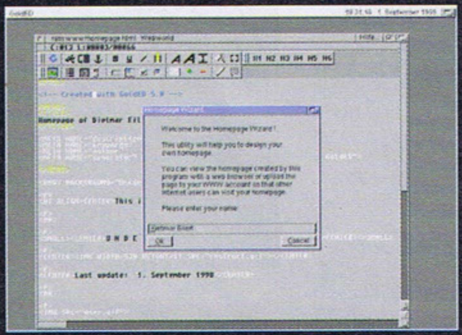
The program has its own look and feel and although it isn't strictly Amiga style guide compliant, it works well enough and there's no denying the editor's power.

New features include:
■ New user interface ■ What's-This help for all buttons ■ Cut & Paste in string fields ■ Dialogues can be left open permanently ■ Simplified configuration ■ Hierarchical FileType configuration ■ Online block formatting while typing ■ Improved tab support (hard tabs) ■ SAS/C environment ■ OS3 compliant colour management ■ Hierarchical project management ■ *STFax* support: send text as fax ■ Repeat count can be set for events ■ Sequence compiler (faster playback) ■ Sequences can be applied to files ■ Improved installation and setup ■ Roget's Thesaurus included ■ Central setup for all add-ons ■ Sequences can be saved as Rexx macros ■ Designed for use under *UAE* too.

As yet, *GoldEd* author Dietmar Eilert has no UK distribution for this product, but you can expect a review next issue, by which time he hopes to have a deal arranged.

You can contact Herr Eilert at Dietmar.Eilert@post.rwth-aachen.de or read more about *GoldEd* at the website: http://members.tripod.com/golded/golded.htm





Now it's commercial, there's no denying the power of *GoldEd 5*, especially with its new spelling checker.

AF Net Corner

We like to think of all you users keeping in touch with each other, so this month we are showing you a selection of some of the many user group websites from around the world.

Local user groups can be a good source of help and advice, as well as a place to discuss the Amiga, get good deals on software and arrange travel to shows.

CCWCCC

www.web.ukonline.co.uk/luke.stowe/cwccc/index.html

The Coventry and Warwickshire Commodore Computer club probably have one of the longest names you're likely to come across. Although the club has been going for 17 years (it used to focus on the Pet and Vic20) it has only recently acquired a website, so forgive them if it doesn't have much content yet.

CCWCCC seem very friendly and have regular meetings (in Coventry) where speakers talk on a range of topics and where everyone generally exchanges information.

DEAL AMIGA CLUB

homepages.centrenet.co.uk/~pagan.ninny/index.html

The Deal Amiga Club is one of the largest and most active in the UK. It meets every week and has over 40 members, so if you live in Kent it may well be worth a visit. The web pages have a few links and contact email addresses for the club.

There is also some space devoted to home pages for some of the members, although few have taken advantage of it so far.

HUDDERSFIELD AMIGA USER GROUP

www.geemil.demon.co.uk/haug.html

This group meets twice a month and usually have a demonstration of some sort going on, from playing with spreadsheets to HTML coding. The website also has some tutorials online, including such diverse topics as desktop video, *Real3D* and MIDI music, so even if you don't intend to visit the club, it might be interesting to visit their sight.

Email addresses for some of the clubs members are also given if you want to ask more details.

Competition winners

POWER FLYER WINNERS

The correct answer for our Power Flyer competition was that the Spirit of St. Louis was the name of the first plane to be flown single-handedly across the Atlantic. Loads of people entered and got it right, but only two people could win and they are:

Mr. D. Harris, Nuneaton, and Curt Nicol, Bideford.

Well done!

Vital Horgan



Hello, remember me? I used to edit *CU Amiga* until they pulled the plug on it just recently. Such is life. Anyway, I persuaded Nick to give me the space on this page that's usually reserved for exciting news about the latest printer cartridge refills – quite an act to follow, so I'll do my best to justify the intrusion.

At the risk of having this column killed off before it's even started, I'd like to have a quick chat about the new Apple Mac, the iMac. No doubt you've seen the adverts that gamble on creating initial interest by pointing out that it's not beige (now there's a good reason to buy a computer if ever there was one).

iMac is Apple's attempt at establishing itself in the home computer market. Apart from the colour scheme, its main selling point is ease of use: an all-in-one computing solution that connects to the Internet and does all the things a PC does, only without any of the hassle.

All the silicon is contained within the monitor cabinet, including the CD drive, so all you have on your desk is a screen, a keyboard and a mouse. How tidy – you might even be allowed to have it set-up in the lounge, instead of banished to the spare room.

There's a nice PowerPC G3 processor hidden behind the facade and it's got a 56K modem built in. There's no floppy drive (or, for that matter, any removable writeable media drive), a move which the Mac press call brave. I'd call it stupid. It's got a price tag of £999.

Now personally, I feel no compulsion to buy one of these at all, but in a funny way I hope that some people do. Until the next generation Amiga appears, a Mac is the only alternative as far as most people are concerned. iMac's degree of success will be a useful barometer of the consumer's desire for an alternative.

As far as we Amiga fans are concerned, iMac would arouse considerable interest but not follow through with major sales, paving the way for a real, new alternative.

I'd say that's quite a likely outcome. Look beyond the space-age casing and iMac doesn't actually offer anything new, and I can't see many people taking the plunge with it at its current price.

Were it £699 then things might be different. Whatever happens, this is an excellent opportunity for Amiga Inc. to sit and watch, tweaking their own battle plans at Apple's expense.

Tony Horgan

Continued overleaf ➡

Infomedia 98



Chris Livermore brings you all the news from Belgium's premier Amiga show.

You can't have escaped reading about the Infomedia '98 show in Antwerp, Belgium, over the last few months. Press releases had been appearing almost daily on the Internet, detailing events, exhibitors, conferences and other activities all planned for the show weekend. Previous Infomedia shows have been almost exclusively PC. This year, however, Tony Mees almost single-handedly took it upon himself to organise an entire hall just for Amigas, in addition to the normal PC stands.

In theory, at least, Infomedia '98 should have been one hell of a show. Two halls, both over three times the size of the World of Amiga shows, one of them exclusively Amiga. In practice, however, it was a little disappointing.

Despite the vast size of the Amiga hall, only half of it was used, and even then there were empty stalls. This was actually due to some of the user groups who had promised to attend the show failing to turn up. There were approximately 15 Amiga retailers at the show, including Epic Marketing, the only UK retailer to make the trip. Most were selling the usual range of goods, with the emphasis on software rather than hardware.

While there were a few A1200 memory expansions and accelerators on sale, the theme throughout the entire show hardware-wise was more towards generic peripherals. New software was almost non-existent and there were no companies demoing products – it was purely retail companies.

Quite surprisingly there were no Amigas for sale at the show. Either the dealers in Belgium have managed to shift all of their stock or there is simply no demand for them.

> **It certainly has the potential to be a great Amiga show, but I can't help feeling that Tony Mees was let down...**

In fact, there didn't seem to be much demand for anything. Every dealer I spoke to said that although people were looking, very few were actually spending any money.

Amiga International were in attendance, in spirit if not in body. Their stand, almost hidden away in the far corner of the hall, was little more than a sales booth for Annex CDs. Poor Axel Kraemer was single-handedly meeting Amiga users and trying to sell Annex CDs to any members of the public that looked interested.



Although widely attended on IRC, there were few speakers actually at the venue itself.

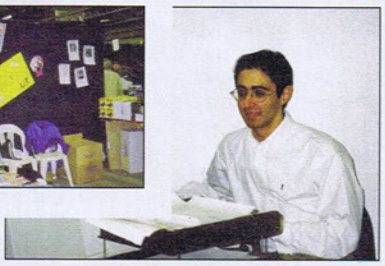




The Amiga wasn't the oldest computer at the show, as some real dinosaurs turned up (above).









There was a good amount turnout at Hotel Atlanta but not much buying going on.







Annex were selling copies of their new single (above).



Due to the non-attendance by Amiga Inc., there were very few working Amigas on the show floor. The majority of Amigas that were being used to demo stuff were running old megademos downloaded from the Internet or, in the case of the Amiga International stand, two A1200s running *Magic Pack* software. Unsurprisingly, this doesn't generate much excitement any more.

As with most shows now, there was an IRC conference from the show floor. A lecture theatre had been set up with about 30 seats and a large screen projector displaying the output of an Amiga running the IRC conference.

However, most of the guest speakers on the IRC channel weren't present at the show. Consequently, there was nothing for people in the lecture theatre to do except stare at an Amiga screen.

In fact, the most exciting event at the show was the world debut of the new Annex single, "Keep the Momentum Going". They made four appearances over the course of the show to a small but loyal Amiga crowd and some very bemused PC owners.

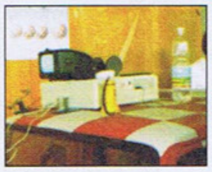
At the end of it all I left with very mixed feelings about Infomedia '98. When you consider that without one person's single-handed effort there would be absolutely no Amiga presence at this annual computer show, you have to consider it a success. It certainly has the potential to be a great Amiga show, but I can't help feel that Tony Mees was let down by a number of people, not least Amiga International, whose apparent lack of effort and interest was very disheartening.

Pianeta Amiga 98

By William Molducci, translated by Salvatore Stilo.

The second Pianeta Amiga, the Italian Amiga fair organised by Jasa Communications, took place in Empoli (Italy) on September 26th and 27th.

Of the many celebrities of the Amiga World, Petro Tyschtschenko (President of Amiga International), Michele Iurillo (editor of *Enigma Amiga Run*, an Italian Magazine) and all of Haage & Partner were there.



Maurizio Bonomi, Michele Iurillo, Sergio Ruocco, Paolo Canali and other Italian and world-wide Amiga personalities took part in a very interesting conference, lacking only the presence of Petro Tyschtschenko, who didn't make a speech, which disappointed the audience.

> "AmigaWriter looks quite nice, with a modern interface, but at this stage it lacks a spelling checker and other features..."

Pianeta Amiga '98 was used to introduce the Italian Amiga community to new products like *AmigaWriter*, Haage & Partner's new word processor, and the 10th volume of the extremely successful *AmyResource* CD.

AmigaWriter looks quite nice, with a modern interface, but at this stage it lacks a spelling checker and other features readily found in the likes of *Wordworth*. However, early purchasers of this version are entitled to a free upgrade to the next version when it appears, and which should have all the extras that this version is missing.

ClassX were showing version 3 of *FontMachine*, compatible with *CyberGraphX* and Draco. This software allows you to save your projects as Amiga ColorFont, Anim5 and AnimGif.

Hurricane Studios were showing *Eat The Whistle*, a new football game distributed by Epic Marketing. It works with graphics boards, can use *AHI*-compatible sound cards and will multitask on any Amiga, including emulators running on a PC.

Overall, the attendance was very good, particularly on the Saturday, and it was up on last year's figure, probably because the show is now more well known. The number of user groups involved was also very heartening.

This year, Pianeta Amiga represented a good chance to bring together the Italian Amiga community, and everyone seemed to be very satisfied by the quality of the organisation and of the exhibitors.



Attendance was up on last year and *Eat the Whistle* (below) proved to be a bit of a draw.

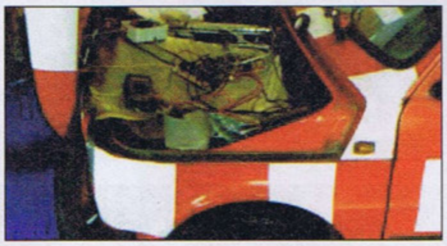






The show is better known now and was well supported by user groups.





A novel approach to in-car entertainment (above and left).







Continued overleaf ➡

MAE 98

MAE 98 by our man on the floor, **Wayne Hunt**, Executive Director for the User Group Network.

Midwest Amiga Expo '98 (MAE for short) has traditionally been one of the two largest yearly shows in North America. All I can say is that my utmost compliments go out to show organisers Ronn Black, Dave Pearce and the rest of the AmiCON crew. The show officially didn't start until Saturday morning but that didn't stop people from showing up early on Friday morning for the seminars available during the day. Set up time for exhibitors started at roughly 5.00pm on the Friday and wrapped up while the vendor party was just getting underway.

On Saturday, since R. J. Mical never made it to the show for one reason or another, Amiga Inc.'s own Bill McEwen gave the keynote speech. In it, he gave us news of the upcoming release of OS3.5, but stated that he couldn't give pinpoint details because OS3.5 is under heavy NDA and is a joint/co-operative effort between approximately 20 authors, with Amiga Inc.'s Fleecy Moss leading the project.

A few highlights of his speech and the OS3.5 information included: retargetable audio (RTA) support; retargetable graphics (RTG); support for a CD-Filing System (CDFS); support for PPC co-processors built-in; Internet-ready; a newly updated and refined interface; plus bug fixes and updates to several areas of the OS. It is due for release in the first half of next year.

One of the more interesting aspects of OS3.5 was that "OS 5.0 will be backwards compatible with 3.5," and that "All of the programs you have that currently run under 3.1 'should' work under 3.5…" From a development standpoint, this is incredible, but curious.

Of the release dates, Bill stated that complications with their initial partner caused delays but they had found a new partner who was "much, much better". Unfortunately, this will cause the release of the development machine to be pushed back by another 90 to 120 days from the original November release. However, importantly, he went on to state that the release of the final machine is still perfectly on track, "for the fourth quarter of 1999". Also coming soon is a new Amiga Inc. web page regarding the OS3.5 and 5.0 progress and upgrades.



> **"Mr. McEwen made specific statements to say that they were reorganising the way they handled press releases…"**

Mr. McEwen made specific statements to say that they were reorganising the way they handled press releases and in the future would give exclusives and advanced knowledge to magazines like *Amiga Format.* This is being done to help stop the decline of Amiga print magazines that has been so unfortunate as of late.



Traditional Boing merchandise was much in evidence (above).



There will be more information on OS3.5, as well as a look at the development machine to be revealed at Computer '98 in Cologne next month. It was a great show in a great location.

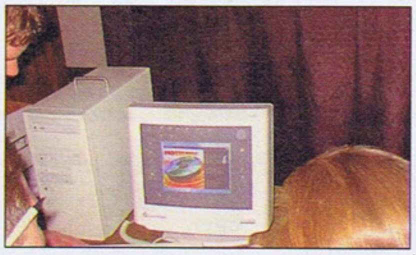
Several vendors had new press releases and products out, including a display of NewTek's new "10X" product, a new release of *Weblord*, an HTML processing utility, and the User Group Network themselves announced not only a new website but a new focus and partnership too.

You could hear developers and attendees alike discussing Carl Sassenrath's newly released *REBOL* programming language and the possibilities it opens up to Amiga online designers. During the developer meeting with the ICOA Representative, Kermit Woodall alerted us to a few surprises as they announced a new refocusing of effort, a new upcoming website (http://www.amiga.net), and a much more streamlined management/committee organisation.

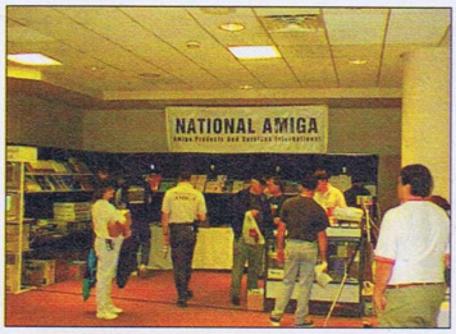
"We're no longer going to operate where things might sit in a committee with no progress," reported Mr. Woodall. "We will absolutely have to institute a way for things to get done efficiently and if there's no progress being made on a project or team, we'll have to find a way to make it happen."

He also went into depth on a new exciting project to help developers protect against software piracy.





Exhibitors and visitors got into the Halloween spirit a bit early (left).







Many visitors arrived before the show was even officially underway.

EYELINE

Bringing you the latest Amiga News from Eyetech

Latest News in Brief

Prograb 24-bit Digitizer now back in stock

Eyetech has obtained new - but limited - stocks of Prograb 24RT, the high performance Amiga video digitizer. The digitizer connects via the Amiga's parallel port, has composite and SVHS inputs and comes complete with its own power supply. It can digitise incoming video at low frame rates and is compatible with ProDad's 'Cocktel' Amiga-to-Amiga videoconferencing software (currently on offer from Eyetech at £39.95)

The ProGrab 24RT is priced at just £119.95.

Eyetech EZWriter A1200 CD burner comes out top in latest comparative review

The concluding remark in the review of a rival CD writing system in the October edition of Cu Amiga is "For my money I would opt for the Eyetech (EZWriter) system . . .". Need we say more?

The EZWriter-SE is available complete with software and 100W PSU for £269.95.

The rewritable version - the EZReWriter-SE is also available for just £299.95.

New Eyetech Professional Pack 3 options introduced

If you buy an Eyetech Professional Pack 3 you now have a time-of-purchase option to buy:

- an upgrade to a 160MHz PPC with 040/25 and 64Mb memory - for just £129.95.
- a 14" monitor and internal scandoubler for just £99.95.

See page 2 of this advertising feature for further details.

New Amiga Motherboards now in stock

We have obtained a limited quantity of new Amiga International 1200 motherboards (excluding ROMs), complete with metal shield and 12 month warranty. The boards are priced at just £129.95.

A replacement motherboard is usually the best long term solution if you have a damaged or unreliable A1200.

Elbox IDE Flyer 'spacers' available for early A1200's

Some A1200 motherboards were shipped with an 'over-populated' clock port connector, requiring the IDE-Flyer to be raised by around 4mm to avoid short circuits. These spacers, if needed, are available to Eyetech IDE-Flyer customers for £4.50 (normally £8.95).

The Elbox IDE Flyer - which improves hard disk transfer rates by up to 600% and gives large (over 4.3GB) hard drive support - is priced at just £59.95 from Eyetech.

Amiga Format rated The Elbox IDE Flyer at 98% in a recent review.

EZGen Low-Cost composite video Genlock introduced

Eyetech's **EZGen** allows Amiga Graphics from, say, Scala MM300, to be overlaid on live composite video from a camcorder and the resultant signal re-recorded to videotape.

The EZGen is priced at just £99.95.

Scanner Promotion extended due to high demand

Buy an award-winning UMAX Scanner and Photoscope Software bundle from Eyetech and get a fully registered copy of ArtEffect-SE 1.5 (normally £59.95) completely **FREE OF CHARGE** *(until stocks are exhausted)*.

Amiga Magic Upgrade Packs available in limited quantities

The ideal way to update your Commodore A1200:

- 3.1 Kickstart ROMs
- Photogenics 1.2SE
- 3.1 Workbench (6 disks)
- Personal Paint 6.4
- Wordworth 4.5 SE
- Organiser 1.1
- Turbocalc 3.5
- Pinball Mania & Whizz Games
- Datastore 1.1
- Workbench 3.1 manuals
- Magic Pack application software manuals . . . . .

. . . . all for just £49.95!!

EZPC TOWER UPGRADED AGAIN

This new EZPC-Tower setup makes the ideal 3D rendering system for your A1200

Eyetech's unique EZ-PC Tower System - which integrates a highly specified PC and your A1200 in the same EZ-Tower via the Siamese RTG 2.5 Ethernet system - has been upgraded - again! And the good news is that the cost remains the same at just £999.95 inc VAT.

Eyetech's EZPC-Tower uses the best aspects of PC technology - low cost, high performance peripherals, retargetable graphics, number crunching speed and networking capability - to add to the Amiga's intrinsic strengths - user-friendly, stable operating system, true multi-tasking, real-time response, low system overheads and ease of setup - all areas where PCs struggle severely (and usually fail!).

So, what's new?



The EZ-PC Tower now comes with the following new features:

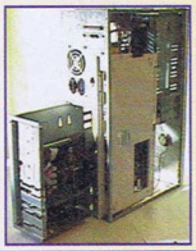
- 14" Digital Monitor with on-site warranty (upgrades to 15" and 17" are also available)
- 30 bit A4 flatbed scanner with up to 9600 dpi resolution (by interpolation).
- 300MHz - capable jumperless PC motherboard with 233MHz MMX CPU and 64MB memory fitted
- Voucher for 75% off the price of the Cinema 4D PC ray-tracing & modelling engine from HiSoft Systems - exclusively for EZPC Tower purchasers.

I feel an urge to expand coming on . . .

So what's all this PC stuff got to do with an A1200? Well, quite simply, PC peripherals are much less expensive than their Amiga counterparts and, by using the PC as a slave to the Amiga, you can save up to 40% of the cost of expanding your A1200. You do not have to use the PC side at all - it really acts just like a low cost Amiga expansion board - in other words a Zorro alternative.

Expanding your A1200 via the EZPC route effectively adds the following facilities to your Amiga:

- ✔ EZ-Tower Plus with keyboard, EZKey adapter & 250W PSU
- ✔ 30-bit A4 single pass flatbed scanner with up to 9600 dpi resolution (by interpolation).
- ✔ TV tuner with frame grabbing and cut-&-paste teletext facilities.
- ✔ 14" digital SVGA monitor with on-site warranty.
- ✔ 16-bit, 32 voice wavetable sound card with midi interface & recording software
- ✔ 2 additional high speed serial and one additional bidirectional parallel ports
- ✔ Amiga accessible high density floppy drive, 32-speed CDROM & 3.2GB hard drive
- ✔ High resolution 24-bit Amiga graphics display via the Siamese RTG2.5 ethernet system.
- ✔ Full colour still & moving video capture card. Full screen, full motion MPEG playback.
- ✔ Full PC with 64MB memory for use as a ray-tracing engine for your A1200 etc.



The EZPC-Tower system showing the A1200 and the PC motherboard (in slide-out frame)

How do they do that (with an EZPC)?

As well as using the PC's peripherals you can of course use some of the PC board's processing power to help with your serious Amiga work. Here's how.

Render 3D raytraced scenes using the PC's CPU

When you buy an EZPC-Tower we will give you a special voucher which entitles you to buy the full PC Version of Cinema 4D v4SE from HiSoft for just £129 - a saving of £400 on its normal price of £529. With this installed you will be able to:

- Model your 3D objects and scenes on the Amiga in Imagine, Cinema 4D etc.
- Save the models to the PC drives directly from your Amiga application
- Import the Amiga file models into Cinema 4D on the PC side
- Render the files on the PC side (at anything up to 100 times the speed of the Amiga side)
- Save the rendered images for viewing on your Amiga.



Write a CD the easy way

If you have the optional CD writer upgrade fitted to the EZPC-Tower, it installs on the PC side complete with the UDF file system. This means that you can literally drag and drop Amiga (or PC) files onto the CD disk icon, create or delete directories and files - just as you would with a hard disk - without worrying about ISO image building, buffer overruns, or any Amiga-side CD writing software. And yes, you can also write and copy CDs the conventional way as well, if you wish, with the software provided.

Access a company inter/intranet via a local area network.

You can use your Amiga to access net-based facilities available on a local area network connected to the PC side of the EZPC system, including intranets, internet gateways and other HTML files, and send and receive emails locally and globally.

Join the BT Home Highway with these very special packages from Eyetech

BT's new Home Highway - giving phone and ISDN access over your existing phone line - is now available and set to revolutionise digital communications. Internet access is nearly 2.5 times as fast as the fastest 56K modem. Just ring '150' for BT Customer Services to obtain details of installation, rental and call charges or to arrange an installation.

In addition to the line you will also need an ISDN terminal adapter (the ISDN equivalent of a modem), an account with an Internet Service Provider who has 128K bps-capable ISDN connectivity, Amiga browser and TCP/IP software, and - ideally - a high-speed serial port on your Amiga.

Does this sound like it is starting to become expensive? Well, think again! Just look at these packages which Eyetech has arranged on behalf of Amiga users:

EyeNet 1 package - One-off cost just £199.95

- 64/128K bps ISDN terminal adapter and RS232 Cable from the World's no. 2 modem manufacturer
- Internet access with a major UK-based provider giving:
- 25Mb of your own web space
- 10 different e-mail addresses of your choosing
- Full Newsgroup access
- 90 days free internet technical support
- 100% local call access (0845) within the UK
- ISDN and modem (56/33/28 Kbaud) dial up access
- **NO ONGOING INTERNET ACCESS CHARGES - *EVER!***

EyeNet 2 package - One-off cost just £229.95

As **EyeNet 1** plus

- PortJunior High-Speed A1200 serial port

EyeNet 3 package - One-off cost just £249.95

As **EyeNet 1** plus

- IBROWSE 1.22 Web Browser
- Miami 3 TCP/IP Stack/Dialler

EyeNet 4 package - One-off cost just £269.95

As **EyeNet 1** plus

- IBROWSE 1.22 Web Browser
- Miami 3 TCP/IP Stack/Dialler
- PortJunior High-Speed A1200 serial port

This has to be *the* internet offer of a lifetime. For about the same price as a 56K modem and a few months internet subscription you can get a 128KB ISDN external terminal adapter and unlimited internet access - *with no further monthly charges - ever!*

NEW PRODUCTS & SPECIAL PRICES FOR THIS ISSUE

DIY EZ-Tower+PC kbd+kbd i/f - £99.95; EZCD-SE buffered interface & s/w £19.95; 170MB Hard Drive A1200 Magic Pack £228.95; 14" monitor+scandoubler £143.95; EZWriter-SE external CDROM burner+MakeCD £269.95; ISDN T/A & lifetime net access £199.95; Scandoubler with full flickerfixer (int or ext) £89.95; Elbox IDE-Flyer High-speed 4 dev buffered i/f £59.95; CamControl digicam s/w £29.95; Award winning Umax SCSI scanner w/PhotoScope and FREE ArtEffect-SE v 1.5 £179.95; 32MB mem £29.95

Award-winning UMAX SCSI Flatbed Scanner

- 600x300 dpi optical resolution, single-pass 24-bit A4 flatbed scanner
- Comes with Photoscope (Amiga) and Mac software. Compatible with all modern SCSI interfaces - including PPC, Blizzard & Classic Squirrel (but not *Surf*-Squirrel)
- PCW 'Best Scanner of 1998' Award - July 1998; PCW 'Best Scanner' September 1998
- Highly-acclaimed ArtEffect-SE v1.5 (normally £59.95) free with this bundle whilst stocks last.



Amiga UMAX Scanner & PhotoScope Bundle now with FREE ArtEffect-SE v1.5 - still just £179.95

Eyetech EZTower System - from just £79.95

Thinking of towering up your A1200? Then you should certainly be considering the unique Eyetech EZTower System

	Backplate kit	DIY* EZTower	Full EZTower
DFO: face plate & ribbon cable	Yes	Yes	Yes
Custom backpanel w/SCSI, audio KOs	Yes	Yes	Yes
A1200 power & LED adptrs	Yes	Yes	Yes
CE-approved metal PC case	n/a	Yes	Yes
No of bays/PSU capacity	n/a	10/250W	10/250W
Directly accessible PCMCIA slot	Yes	Yes	Yes
DIY assembly instructions	Yes	Yes	n/a
Installation instructions	Yes	Yes	Yes
PC board/Siamese compatibility	Yes	Yes	Yes
Assembled & A1200-ready	No	No	Yes
Eyetech installation option	No	No	Yes
Cost with options as specified	£39.95	£79.95	£99.95
With EZKey2 & PC k/b	**n/a**	**£99.95**	**£119.95**

*With the DIY EZ-Tower *you* have to remove the PC tower back plate and some internal shelving and fix the new backpanel in place

- ✔ The easiest way to re-house your A1200 by far
- ✔ Expand your system with EZPC or Zorro slots
- ✔ 250W PSU with PC and Amiga power connectors
- ✔ Available in 4 models to suit different skills and budgets
- ✔ The only tower allowing both PC & A1200 in one case

"This is definitely one of the easiest solutions to building your own Tower" - *Amiga Format*

"The Eyetech Tower offers clever solutions with a Velcro easyfit mentality" - *CU Amiga*



EZKey2

- ✔ Autodetects and remaps Amiga & PC keyboards
- ✔ Plugs directly into the ribbon cable slot on the A1200

EZKey2 alone - *just*	**£28.95**
EZKey2 and Windows keyboard	**£38.95**
EZKey2, A4000 k/b & 6-to-5 pin adapter	**£58.95**

Expand your CD32 - send for details!



SK32 Mk2	£149.95
SX32 Pro50	£269.95
SX32 Pro40EC	£199.95

Join the Digital Imaging Revolution with Eyetech

Amiga Digital Imaging Software from Andreas Gunther

SCANQUIX4 & PHOTOSCOPE SOFTWARE - *just £59.95*

- ✔ 24 bit scanning with full range of editing options
- ✔ 'Scan-to-disk' option in Jpeg or IFF
- ✔ Stand-alone use or integrates with your Art package (AdPro, ArtEffect, PPaint, Photogenics, ImageFX, XLPaint, Pagestream 3, DPaint5) via AREXX
- ✔ SQ4 - for Epson, HP SCSI & Epson parallel scanners, Photoscope for UMAX 610S/1210S

CAMCONTROL AMIGA DIGITAL CAMERA SOFTWARE - *now just £29.95*

- ✔ Serial connection versions available for most popular models of Kodak, Minolta, Olympus, Casio & Fuji digital cameras
- ✔ Picture transfer, camera control & sideshow options (camera dependant)
- ✔ Stand-alone use or integrates with your Art package (AdPro, ArtEffect, PPaint, Photogenics, ImageFX, XL Paint, Pagestream 3, DPaint 5) via AREXX
- ✔ Selectable serial device for use with high-speed interfaces like the PortJnr

TURBOPRINT 6 - The essential partner for your digital imaging work

- ✔ The most comprehensive, fastest replacement printing system for all WB2.x+ Amigas
- ✔ Supports the latest Epson, Canon, HP printers - including the **Award-winning Epson Stylus Photo**
- ✔ Integrates seamlessly with ScanQuix/Photoscope scanning software and CamControl digital camera software
- ✔ Poster printing, image tiling, colour correction, print spooling, photo optimisation etc, all included as standard
- ✔ Selectable parallel device for use with high-speed interfaces such as the PortPlus (see below)



£38.95

PortPlus

2 x 460Kbd serial + 1 x 800KB/s Parallel

£79.95

or just **£70** if bought with Turboprint 6



PortJnr

1 x 460Kbd serial port

(for attachment to the A1200's unused 'clock' port)

£39.95 - or just **£30** if bought with CamControl software

AMIGA 1200 Magic Packs

Direct to Eyetech from Amiga International Inc.

- ✔ Full UK specification with Kickstart 3.1/Workbench 3.1 disks and manuals. UK PSU, mousemat, TV lead and 2mb graphics memory (in addition to any memory expansion included in the packs below).
- ✔ Fantastic software bundle including Wordworth 4SE, Turbocalc 3.5, Datastore 1.1, Photogenics 1.2SE, Personal Paint 6.4, Organiser 1.1, Pinball Mania and Whizz.
- ✔ Hard drive versions come with Scala MM300 pre-installed.
- ✔ Other options available, eg EZ-Tower Magic Pack bundles from *£338.95* - ring for details.
- ✔ Time-of-purchase upgrade packages available at very special prices - see asterisked* items in the 'Pack' boxes below.



Eyetech *Starter Pack* & *Starter Pack-Plus*

Diskette based system as above	*Just £184.95*
170MB HD-based system as above	*Just £228.95*

*Add an '030/33EC accelerator with 8MB for just £59.95**

Eyetech *Productivity* Pack 3

170MB HD,030/33MHz/MMU/FPU/8MB ***Just £328.95***

*U/g to an '040/25MHz/MMU/FPU w/16MB &100W PSU for just £99.95**

*&/or upgrade to an EZTower-Plus with EZKey & PC k/b for just £110.00**

Eyetech *MiniTower* Pack 3

2.5GB HD, '040/25MHz/MMU/FPU/16MB, 20-speed CDROM, EZ-CD-Mk4 4-device buffered i/f & cables, EZIDE s/w, MiniTower case with 230W PSU ***Just £598.95***

*Upgrade to an '040/40MHz/MMU/FPU with 32MB for just £69.95**

Eyetech *Professional* Pack 3

4.3GB HD, '040/33MHz/MMU/FPU/32MB, 24-speed CDROM, EZCD-Mk4 4-device buffered i/f & cables, EZIDE s/w, EZTower-Plus case with 250W PSU ***Just £798.95***

*U/g to a 160MHz PPC & '040/25MHz/MMU/FPU w/64MB for £129.95**

*. . . &/or add a 14" Monitor & Scandoubler for just £129.95**

EZVGA Scandoublers & Flickerfixers (internal & external) from just £54.95

The *Top-Rated* Eyetech CD-Plus Range for the A1200

"Eyetech have come up with a real winner with this new CDROM drive" - *Ben Vost, Amiga Format*

20-speed CDPlus-SE now just £85.95
24-speed just £88.95; 32-speed just £98.95!

- ✔ Whisper quiet 20, 24 or 30-speed CDROM mechanism
- ✔ **EZCD-SE** 4-device buffered interface, 3-connector 40-way and 2-connector 44-way cables included
- ✔ CDPlus driver software specially written for Eyetech by the author of IDE-*fix*
- ✔ Optional Amiga and CDDA audio mixer with Gold phono audio jacks - just £19.95 each
- ✔ 20-watt CE-approved PSU complete with 13A plug.
- ✔ Optional upgrade to MiniTower or Desktop case with 230W PSU (which can also hold extra drives and power your Amiga) *just £20 extra!*



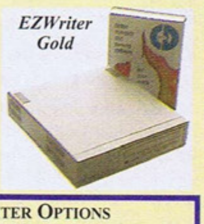


A1200 EZWriter and EZReWriter CDROM burners

- ✔ Both are IDE/ATAPI reader/writer units with MakeCD Amiga writing software.
- ✔ **EZWriter** units cut 'Gold' CD blanks at 2x speed & read CDROM's at 8 speed.
- ✔ **EZReWriter** units cut 'Gold' CD blanks and CD rewritable disks at 2x speed and read conventional CD's at 6 speed.
- ✔ Gold 650MB CD blanks (for use with either model) are available at 10 for £10 at time of purchase.
- ✔ CD rewritable disks are just £5 each when bought with the EZReWriter.



EZWriter Internal



EZWriter Gold

EZWriter/EZReWriter Options

EZWriter Internal - for A4000 or A1200 Tower	£249.95
EZWriter-*SE* - External A1200 unit with separate 100w PSU	£269.95
EZWriter-*Gold* - Ext A1200 unit w/int 40w PSU, Gold Audio skts	£299.95
EZWriter-*MT* - Mini-Tower-cased unit with 230w PSU which can house an additional LS120/Zip/CDROM ***and*** power your A1200	£299.95
EZReWriter-*SE* - Ext A1200 CD rewriter w/separate 100w PSU	£299.95

With EZCD-SE i/f, 44-way & 40-way cables & CDROM s/w - *add £20*
With EZCD-Mk4 i/f, 44-way & 40-way cables & EZ-IDE s/w - *add £30*
With IDE-Flyer or IDE-Express interface, cables & software - *add £50*

AMIGA SVGA MONITORS

For use with Amiga Zorro & the new PPC graphics cards, scandoublers & the EZPC-Tower system

- ✔ All monitors come with a 3-year warranty and at least 1 year on-site maintenance - call for details.
- ✔ Special pricing on scandoublers/flickerfixers bought with monitors from just ***£45 extra***
- ✔ Monitor specifications are quoted as the highest vertical refresh rate at the maximum resolution. Higher refresh rates (>=72Hz) at lower resolutions are available and give a more visually relaxing display.
- ✔ Scandoubler/flickerfixers have resolutions governed by the Amiga's AA/AGA chipset and are restricted to a maximum vertical refresh of 73Hz and a maximum usable resolution of 724Hx566V. The PPC BVision supports 1600x1280@72Hz.



14" SVGA 0.28DP, 1024Hx768V @ 60Hz	**£98.95**
15" SVGA 0.28DP, 1024Hx768V @ 60Hz	**£128.95**
17" SVGA 0.28DP, 1280Hx1024V @ 60Hz	**£248.95**
17" SVGA 0.26DP, 1600Hx1280V @ 75Hz	**£399.95**

APOLLO ACCELERATORS

Turbo 1230LC '030EC/25MHz (5 MIPS) - max 8MB - ONLY £44.95



OPTIONS: 25/33 MHz FPU + £5.00, MMU, (non-EC) version+ £5.00, 33MHz version (7 MIPS) + £5.00

A600 '030/33MHz/MMU/FPU(7 MIPS) to 32MB	£69.95
A600 '030/33MHz/MMU/FPU(7 MIPS) w/32MB	£99.95
A1200 '040/25MHz/MMU/FPU* (19 MIPS)	£127.95
A1200 '040/33MHz/MMU/FPU* (25 MIPS)	£157.95
A1200 '040/40MHz/MMU/FPU* (30 MIPS)	£187.95
A1200 '060/50MHz/MMU/FPU* (39 MIPS)	£287.95
A1200 '060/66MHz/MMU/FPU* (51 MIPS)	£337.95

**To 32MB. Optional 2nd simm socket (tower only) offers 64MB total*

4MB - £9.95 8MB - £14.95 16MB - £24.95 32MB - £29.95

Tip: Buy your memory with the accelerator to ensure full compatibility

phase5 PowerUp PPC + '040/'060 Accelerators

Without SCSI (not upgradable)

A1200 160 MHz 603e PPC with '040/25/MMU.FPU	Only £238.95
A1200 160 MHz 603e PPC with '060/50/MMU/FPU	Only £448.95
A1200 240 MHz 603e PPC with '040/25/MMU/FPU	Only £348.95
A1200 240 MHz 603e PPC with '060/50/MMU/FPU	Only £568.95

Add £50 to the above prices for factory fitted on-board Fast SCSI II Interface

Blizzard Vision Permedia 2 PPC graphics card now available! Unbelievable quality and speed - 1600x1280@72Hz! No Zorro slots needed! 4mb card - £168.95 or just £148.95 with a PPC

A1200 HARD DRIVES - LS120, ZIPs

Thinking of buying a BIG drive? Don't waste your money on ***ANY DRIVE OVER 4.3GB*** as the Amiga O/S doesn't support it! (2^32-1 bytes actually). They appear to work but overwrite the RDB after 4.3GB into the drive.

- ✔ All drives come ready to use with WB3.0 preinstalled & WB2.x install script
- ✔ All drives over 200 MB come with over 45 top quality utilities (not shovelware) and MMe multimedia authoring s/w preinstalled, configured & ready-to-run

TowerDrives (3.5" drives, 25mm high):

1.7GB - £89.95 2.1GB - £94.95 3.2GB - £109.95 4.3GB - £129.95

LS120 & Zip Drives (ATAPI i/f - EZIDE needed):

LS120 (HD Floppy/120MB Cart) - £79.95 3 x 120MB carts - £29.95
Zip Drive (Mac emul'n compat) - £79.95 3 x 100 MB carts - £29.95

2.5" Instant Drives for the A600/A1200 SX32

20MB	An entry-level drive for the SX32/A600	£29.95
170MB	An entry-level drive for the SX32Pro/A1200	£59.95
720MB	A drive for serious A1200/SX32 Pro users	£99.95
1.4GB	A high performance drive for power users	£129.95
1.8GB	Top-class drive for the A1200/SX32Pro	£149.95



Complete A1200 IDE solutions

PRICES DOWN on i/fs & s/w

The EZCD-SE & EZCD Mk4 4-device buffered interfaces

EZCD-SE/Mk4 4-device buffered i/f and CDROM software	£18.95/£28.95
EZCD-SE/Mk4 CDROM s/w, 3x40 way & 2x44-way cables	£28.95/£38.95
EZCD-SE/Mk4 EZ-IDE s/w, 3x40 way & 2x44-way cables	£38.95/£48.95
EZ-IDE Amiga IDE, ATAPI, CDROM and removable media driver s/w	£34.95
If bought with any EZCD i/f Zip or LS120 drive	£9.95
Upgrade from Eyetech CDPlus/IDEfix Software (trade-in & proof of purchase req'd)	£14.95

The Eyetech Abridged Guide to Buffered Interfaces

Interface	Max Xfer	Suitability
EZCD-SE	2MB/s	030/40 Accelerator (or slower/none)
EZCD-Mk2	3MB/s	030/50, 040/xx, 060/xx
IDE-Express	5Mb/s	040/xx, 060/xx, UDMA HD & 24speed+ CDROM
IDE-Flyer	8MB/s	040/xx, 060/xx, UDMA HD & 24speed+ CDROM



Elbox IDE Flyer interface & CDROM file system (>4.3GB HD support)	£59.95
IDE Express interface & IDE-*fix* Express software	£59.95

Eyetech Amiga Parts & Price Index December 1998 - 44 (0)1642-713-185 - 07000 4 AMIGA

PRODUCTS MARKED IN RED ARE SPECIAL VALUE ITEMS

Interfaces and Adapters: EZ-Key & DIY Tower Components

ADPT-EZK2	Mk 2 Amiga/PC k/b -> A1200 kbd direct connect	28.95
ADPT-EZK2-A4K	A1200 EZKey MK2/6p -> 5p adptr/A4000 kbd bdle	58.95
ADPT-EZK2-W95	Mk2 Amiga/PC k/b ->A1200 rib cab+W95 kbd	38.95
ADPT-HD-2/3	2.5"/44way -> 3.5"/40w+4w & mtg bracket	11.95
ADPT-HD-3/5	3.5" Zip/SyQuest/FDD/HD brkt/pl ->5" bay	5.95
ADPT-KBD-5P6P	Amiga/PC k/b adapter 5p din-F ->6p m/d-M	5.95
ADPT-KBD-6P5P	Amiga/PC kbd adapter 6p mindin-F ->5pd-M	5.95
CAB-KBD-MF	5p DIN M - 5p DIN F k/b ex cable 1.2m	7.95
ADPT-DF0-FP	Tower faceplate adapter for A1200 int FD	6.95
ADPT-DF0-TWR	34-34 way cable and faceplate for DF0	12.95

Interfaces and Adapters: A1200 Ethernet, SCSI

ADPT-ETH-BNCT	BNC T-piece 2xM + 1xF	4.95
ADPT-ETH-TERM	Ethernet BNC coax terminator 50R	4.95
ADPT-PCM-ETH-C	PCMCIA ethernet card with Amiga/PC drivers	79.95
ADPT-PCM-ETH-H	Hydra PCMCIA ethernet card with Amiga drvrs	129.95
CAB-ETH-60C	Ethernet coax/BNC-F 60cm for Siamese	9.95
CAB-UPT-X60C	Crossed twisted pair/RJ45 for Sisys 60cm	6.95
ADPT-SCS-CSQR	Classic Squirrel PCMCIA SCSI i/f 50pCM	59.95

I/F & Adapters: Flickerfixers, Genlocks, Video Digitisers VGA Adapters, Monitor Leads

ADPT-GLK-COMP	EZ-Gen composite video Genlock for A1200	99.95
ADPT-VGA-BV4M	BVision 4MB gfx card for A1200 (needs PPC)	169.95
ADPT-VGA-BMON	Auto Amiga/BVision m/sync monitor switch	39.95
ADPT-VGA-MK2	EZ-VGA-Mk2 external s/doubler PLL u/gradable	69.95
ADPT-VGA-PLFF	EZ-VGA-Plus external flickerfixer 23F-15F PLL	99.95
ADPT-VGA-SDUG	SDBL2 to SD-flickerfixer u/g	50.00
ADPT-VGA-INSD	EZ-VGA internal A1200 s/doubler non-upgrad'le	54.95
ADPT-VGA-INFF	EZ-VGA- internal A1200 flickerfixer	89.95
ADPT-VGA-SESD	EZ-VGA-SE s/doubler 23F-15M Xtal not u/g	54.95
ADPT-VGA-SEFF	EZ-VGA-SE flickerfixer 23F-15M Xtal	89.95
ADPT-VGA-15M23M	VGA 15pHD-M -> 23pD-M Amiga RGB adapter	14.95
ADPT-VGA-15M9F	Adapter from 15p HD-M VGA to 9pD-F	9.95
ADPT-VGA-9M15F	Monitor adapter 9p D-F to 15p HD-M	9.95
ADPT-VGA-UNBF	Amiga 23 pin(f)-15 pin HD(f) VGA adapter	12.95
ADPT-VGA-BUF	Amiga 23pin-F to 15pinHD-F buffered adapter	16.95
ADPT-PGB-24RT	ProGrab 24-RT Amiga parallel port video digitiser	119.95

I/F & Adapters - IDE/ATAPI, Serial, Parallel & Floppy Drive

INT-IDE-FLYR	Elbox 4-dev high performance buf'd A1200 IDE i/f	59.95
INT-IDE-XPRS	IDE-Express 4-dev high performance buf'd A1200 i/f	59.95
ADPT-FLR-SPC	ROM spacers for Elbox IDE-Flyer	8.95
ADPT-FLR-SPC-SP	ROM spacers for Elbox IDE-Flyer pur with IDE-Flyer	4.50
INT-12I-EZCD4	Mk4 4-dev buf IDE i/f w/AIPU w/EZCD4 s/w	28.95
INT-12I-EZCD4/C	Mk4 4-dev buf IDE i/f w/3x40,2x44 13cm cabs	38.95
INT-12I-EZCD4/CE	Mk4 4-dev buf IDE i/f w/3x40, 2x44cabs, EZIDE	48.95
INT-12I-EZCDSE	Economy 4-dev buf IDE i/f w/A1200 CD s/w	18.95
INT-12I-EZCDSE/C	Econ 4-dev buf IDE i/f w/3x40,2x44 13cm cabs	28.95
INT-12I-EZCDSE/CE	Econ 4-dev buf IDE i/f w/3x40, 2x44cabs, EZIDE	38.95
INT-4KI-CD4	4-device EIDE i/f for A4000 w/CDROM s/w	18.95
INT-FDD-DF0	Interface for std Sony FDD for DF0 880KB	9.95
INT-SER-PTJR	PortJunior - 460KB serial i/f for A1200	39.95

Zorro 2/3 Boards and Adapters

GFX-Z2-CV643D	C64/3D graphics card w/out f/fixer (limited stock)	139.95
ADPT-VGA-AMON	Auto Amiga/CV643D m/sync monitor switch	39.95

Cables & Cable Adapters: Audio & Mains

CAB-AUD-CD	CDROM invt'd T audio cab .6m + 2xRCA plg	9.95
CAB-AUD-MIX	RCA(phono)-M -> RCA-M+RCA-F mix lead 1.8m	6.95
CAB-AUD-2M2M	RCA(phono)-2xM -> RCA2xM stereo lead 1.8m	4.95
CAB-AUD-MJ/PH	3.5mm st minijack->2xphono-M plugs 1.2m	5.95
ADPT-AUD-RCA	RCA(phono)-M -> 2xRCA-F adapter	2.50
ADPT-AUD-RCA-G	RCA(phono)-M -> 2xRCA-F gold plated adapt	3.50
CAB-IEC-1.5M	AC power cable 13A plug -> IEC skt 1.5m	2.95
CAB-IEC-4X13	AC powerstrip 1xIEC-M -> 4x13A-F mains skt	19.95
PLUG-IEC	Rewirable IEC monitor plg for PSUs/MT/DT	4.95

Cables & Cable Adapters: Serial, Modem, SCSI, Printer

CAB-SER-EX2M	DB25-M -> DB25-F RS232 extn cab 2m	7.95
CAB-SER-EX50C	DB25-M -> DB25-F RS232 extn cab 0.5m	6.95
CAB-SER-NUL2M	Null modem cable w/ D9F & D25F at each end	9.95
ADPT-SER-25F9M	25p-F to 9pM serial RS232 adapter	4.95
ADPT-SER-25M9F	25p-M to 9pF serial RS232 adapter	4.95
ADPT-SCS-50C2F1M	50pin Centronics 'T' 2x F to 1 x M SCSI adapter	14.95
ADPT-SCS-50/50CF	Centronics 50p-F to Centronics 50p-F (for Squirrel)	14.95
CAB-BT-EX10	10m BT extn cable + 2 way phone adapter	9.95
CAB-BT-MOD	FCC684/6 to BT4 modem phone lead 1m	5.95
CAB-SCS-25D/50C	SCSI cable DB25-M -> Cent50-M 1m	9.95
CAB-SCS-25D/25D	SCSI cable DB25M-DB25M mac type	9.95
CAB-SCS-25D/50C	SCSI cable Centr50M->Centr50M 1m	9.95
CAB-SCS-50H/50C	SCSI-2 cable 50h/pDM->Centr50M 1m for PPC	19.95
CAB-SCS-50H/25D	SCSI-2 cable 50h/pDM->25D-M 1m for PPC	19.95
CAB-PAR-FULL	Bidirectional printer cable all pins connected	9.95

Cables & Cable Adapters: VGA, Keyboard, Switchboxes & Cables, Scart Cables

ADPT-SW-S/K	Dual monitor & k/b switchbox	19.95
ADPT-SW-S/K/M	Dual monitor, k/b & mouse switchbox	24.95
CAB-KBD-MM	5p DIN M - 5p DIN M k/b cable 1.2m	7.95
CAB-VGA-MF	15p DM-HD - 15p DF-HD VGA ext cable 2m	9.95
CAB-VGA-MM	15p DM-HD - 15p DM-HD VGA cable 2m	9.95
ADPT-SCAR-CMP	Amiga comp video (RCA)+2xAudio to SCART	12.95
ADPT-SCAR-RGB	Amiga 23p+2xRCA to RGB TV SCART + audio	12.95

Cables: HD, CDROM, Floppy, Clock Port Data & A1200 HD Power

CAB-PD-40F44F	2.5" (44F) to 3.5" (40F) data cab adapt for A1200	9.95
CAB-PD-2F	Power splitter floppy drive to hard drive + floppy	9.95
CAB-PD-30C	44->40way 3.5" HD data & pwr cabs -A1200	14.95
CAB-HD-KIT	A1200 full 3.5" hard drive fitting kit	24.95
CAB22-2W-9C	22way-Fx2 A1200 clock port cable 9cm o/a	5.00
CAB34-2W-50C	34way-F x2 FDD ribbon cable for tower	9.95
CAB40-2W-20C	40 way IDE cable 2 connector 20cm	5.00
CAB40-3W-1M	40Way IDE/HD/CD cable 3 connector 1m o/a len	9.95
CAB40-3W-60C	40w-F x3 HD/CD/IDE cable 20+40=60cm o/a	9.95
CAB40-CUST	Custom cable 3x40way IDE up to 1.5m	19.95
CAB44-2W-13C	44way (2.5" HD) cable 2 cntr, 13cm o/a	9.95
CAB44-2W-60C	44way (2.5" HD) cable 2cntr, 60cm o/a	19.95
CAB44-3W-12C	44way (2.5" HD) cable 3 cntr, 12cm o/a	12.95
CAB44-3W-24C	44way (2.5" HD) 7+17cm,3 cntr,24cm o/a	14.95
CAB50-CUST	Custom cable 3x50way IDC SCSI + 1xCent50-F 60cm	19.95

Cables: HD, CDROM, Floppy Power Splitters - Tower Systems

CABPW-1W-1F	Power converter cab HD-M -> FD-F	4.95
CABPW-2W-1H1F	HD/FD pwr splitter HD-M->1xHD-F/1xFD-F	6.95
CABPW-2W-2F	FDD power splitter 4pM->2xFD-F	6.95
CABPW-2W-2H	HD/CD pwr splitter 4p-M ->2x 4p-F 15cm	6.95
CABPW-3W-2H1F	HD/FD pwr splitter HD-M->2xHD-F/1xFD-F	8.95
CABPW-3W-3H	HD power splitter HD-M -> 3xHD-F	8.95
CAB-HD-PWXTN	4p-M -> 4p-F HD/CD power cab ext 0.9m	9.95
CAB-HD-FD/4	23p-M-floppy -> 4p F HD/CD pwr 0.9m	9.95

New - ISDN Terminal adapters & Internet Access Bundles

NET-EYE-1	128Kbps ISDN T/A + unlimited, no subs i/n access	199.95
NET-EYE-2	128K ISDN T/A ,u/l no subs i/n access, PortJnr i/f	229.95
NET-EYE-3	128K ISDN T/A ,u/l no subs i/n acc, Ibrowse, Miami	249.95
NET-EYE-4	128K ISDN T/A,u/l no subs i/n acc, Ibrs, Miam, PtJn	269.95

CDROM Systems including EZ-Tower & MT/DT Bundles

CD-SE-20X	CDPlus-SE system 20 speed with CDROM s/w	85.95
CD-SE-24X	CDPlus-SE system 24 speed with CDROM s/w	88.95
CD-SE-32X	CDPlus-SE system 32 speed with CDROM s/w	98.95
CD-DT/MT-20X	CDPlus Desktop/Minitower 20 x with CDROM s/w	105.95
CD-DT/MT-24X	CDPlus Desktop/Minitower 20 x with CDROM s/w	108.95
CD-DT/MT-32X	CDPlus Desktop/Minitower 20 x with CDROM s/w	118.95
ADPT-AUD-CDSE	CDPlus-SE A1200/CD audio mixr/adapter	19.95
CAB44-CD-13C	44way (2.5" HD) cable purch with CD/HD 13cm	6.00
CAB40-DDC	A1200 IDE skt adptr 40F-40M with mtgs 15cm	9.95

CDWriter/ReWriter Systems inc. EZ-Tower & MT/DT Bundles

CDR-IN-2x8	EZWriter 2/8x w/MakeCD for A4k,Twr	249.95
CDR-PL-2x8	EZWriter-Gold external 2/8x w/MakeCD	299.95
CDR-SE-2x8	EZWriter-SE external 2/8x w/MakeCD	269.95
CDR-DT/MT-2x8	EZWriter Desktop/Minitower 2/8 speed w/MakeCD	299.95
CDRW-IN-226	EZReWriter 2x2x6 w/MakeCD for A4k,Twr	279.95
CDRW-PL-226	EZReWriter-Gold external 2x2x6 w/MakeCD	339.95
CDRW-SE-226	EZReWriter-SE external 2x2x6 w/MakeCD	299.95
CDR-CDSE-UG	EZCD-SE+40+44way cabs + CDROMs/w w/CDR	20.00
CDR-CDM4-UG	EZCDMk4+40+44way cabs + EZIDE s/w w/CDR	30.00
CDR-CDFL-UG	IDE-Flyer high-speed IDE i/f, s/w, cabs purch w/CDR	50.00
CDR-CDXP-UG	IDE-Express high speed IDE i/f, s/w, cabs pur w/CDR	50.00
CDR-DSK-10	Recordable CD media (WORM) 650MB x10	19.95
CDR-DSK-10-SP	Recordable CD media 650MBx10 pur w/EZWriter	10.00
CDRW-DSK	Single CDrewritable disk 650MB	9.95
CDRW-DSK-SP	Single CDrewritable disk 650MB pur w/EZReWriter	5.00
DVR-MCD-TAO-P	MakeCD TAO (P) Amiga CD rec s/w w/ATAPI	38.95

EZ-Tower Systems, MiniTower/Desktop Cases & Accessories

CASE-FT-SLE	DIY EZTower, 250W PSU, EZKey, PC kbd *lim. stock*	99.95
CASE-FT-1200	Full A1200 Tower 250WPSU,LED adpt,FD cab	99.95
CASE-FT-EXKT	EZ-Tower conversion kit - No PC Tower	39.95
CASE-FT-KIT	EZ-Tower kit w/ bkpnl for self conversion	79.95
CASE-FT-PLUS	Full A1200 EZTWR, EZKEY i/f, PC kbd	138.95
CASE-DT	Desktop case with 200W+ psu for HD/CDROM	29.95
CASE-MT	MiniTower case with 200W+ psu for CD/HD	29.95
ADPT-AUD-EZTW	EZTwr audio mixer/adapter for A1200/CDROM	19.95
ADPT-SCSI-EZTW	EZTwr SCSI adpt 30cm 2xCent50F, 1xIDC50F	19.95
CAB-SER-SSQ	9pDM->9pDF SurfSq EZTwr ser extn cab 50cm	9.95

SVGA Monitors - require Scandoubler and/or Flickerfix to use all Amiga modes

MON-14-.28	14" dig SVGA 0.28DP 1024x768@60Hz - 3yrO.S.	98.95
MON-15-.28	15" dig SVGA 0.28DP 1024x768@60Hz - 3yrO.S.	128.95
MON-17-.28	17" dig SVGA 0.28DP 1280x1024@60Hz - 3yrO.S.	248.95
MON-17-.26	17" mon 135MHz, 0.26DP 1600x1280@75Hz	399.95
ADPT-MON-SESD	EZVGA-SE ext s/dblr non-u/g'able pur w/ mon'r	45.00
ADPT-MON-SEFF	EZVGA-SE ext flickerfixer purch w/ monitor	80.00
ADPT-MON-M2SD	EZVGA-Mk2 ext s/dblr u/g'able purch w/ monitor	60.00
ADPT-MON-PLFF	EZVGA-Plus ext flickerfixer purch w/ monitor	99.95
ADPT-MON-INSD	EZ-VGA internal s/doubler purch w/ monitor	45.00
ADPT-MON-INFF	EZ-VGA internal f/fixer purch w/ monitor	80.00

Digital Cameras and Amiga Digital Camera Software

CAM-FUJ-DS7	Fuji DS9 cam, psu, LCD disp, mem crd w/ s/w	249.95
DVR-CAM-CAS	CamControl s/w for Casio QV10/100/300	29.95
DVR-CAM-FUJ	CamControl s/w for Fuji DS5/DS7	29.95
DVR-CAM-KOD	CamControl s/w for Kodak DC20/DC25	29.95
DVR-CAM-MIN	CamControl s/w for Minolta Dimage V	29.95
DVR-CAM-OLY	CamControl s/w for Olympus 420L/820L/1000L	29.95
INT-12I-PTJR-SP	PortJnr hi-speed ser i/f pur with CamControl s/w	30.00

Amiga CDROM, CDWriter, IDE/ATAPI, Printer, Scanner & Video Software

DVR-EZIDE	EIDE/ATAPI HD/CDROM/ZIP/LS120/SyQst drvr	34.95
DVR-EZIDE-CU	P/x upgrade to EZIDE from compet product	14.95
DVR-EZIDE-SP	EIDE/ATAPI enhancer/CDROM s/w bundle pri	9.95
DVR-MKCDP	MakeCD(P,TAO) Amiga CD writing s/w	38.95
DVR-SQ4	ScanQuix4 w/ 1 Amiga driver (Epson or HP SCSI)	59.95
DVR-PHS	PhotoScope UMAX-SCSI Amiga scanner driver	59.95
DVR-ENPR	EnPrint. Amiga printer driver for pre-03/97 Epsons	9.95
DVR-TBPR6	TurboPrint 6.x Amiga printer driver English	38.95
ADPT-SQ3-PAR	SQ3 adapter Epson scanner->par prt cable	9.95
CAB-PAR-FULL	Bidirectional printer cable all pins connected	9.95
SCN-FBA4-BDL3	UMAX award-winning SCSI A4FB scanner with s/w	179.95

Free ArtEffect-SE v1.5 with above whilst stocks last

ADPT-SCS-CSQR-SP	Classic Squirrel PCMCIA SCSI i/f 50pCM pur w/scnr	49.95

Hard & Floppy Drive, CDROM, LS120 & Zip Mech. & Cases

CD24-BARE	Bare 20 speed CDROM mechanism for twr/A4k	39.95
CD32-BARE	Bare 32 speed ATAPI CDROM mechanism	48.95
FDD-ITL-1200	Replacement A1200/600 int FDD 880KB	24.95
FDD-ITL-BARE	Bare 1.44/880 FDD for tower (needs i/f)	19.95
FDD-ITL-D/C/I	Twr int 880Kb FDD(Sony/EZDF0/cab bundle)	29.95
FDD-ITL-D/I	Twr intl 880Kb FDD (Sony/EZDF0) No cable	24.95
HD2-21	21MB 2.5" hard drive 90 days warranty	29.95
HD2-170	170MB 2.5" hard drive	59.95
HD2-720	720MB 2.5" hard drive	99.95
HD2-1.4	1.4GB 2.5" hard drive for Amiga	129.95
HD2-1.8	1.8GB 2.5" Hard Drive	149.95
HD3-2.1	2.11GB 1"x3.5" non-InstantDrive for twr	94.95
HD3-3.2	3.2GB 1"x3.5" IDE drive for tower	109.95
HD3-4.3	4.3GB 1"x3.5" IDE drive for tower	129.95
HD3-LS120	Panasonic LS120 floppy/optical 1.4/120MB	79.95
HD3-LS120-CT1	Single 120 MB cartridge for LS120 drive	14.95
HD3-LS120-CT3	3-pack of 120MB (nominal) LS120 carts	29.95
HD3-ZIP-CT1	Single 100MB (nominal) Zip cartridge	14.95
HD3-ZIP-CT3	3-Pack of 100MB (nominal) Zip cartridges	29.95
HD3-ZIP-IDE	Bare ATAPI/IDE Zip drive internal	79.95
CAB44-CD-13C	44way (2.5" HD) cable sold with CD/HD 13cm	6.00
CASE-ZIP	Metal slim case-FDD/IDEZip/SyQuest/LS120	9.95
CASE-HD-ECON	External 3.5" HD case no psu	19.95
CASE-HD-REM	Removable drive case for 3.5" HD (metal)	24.95

Keyboards, Mice, Trackballs, PSU's, misc h/w & s/w

FAN-60MM	Cooling fan for A1200 60x60x25mm 5/12v	14.95
KBD-A1000	A1000 keyboard with 6-pin mini-Din cntr*	39.95
KBD-A1200	Replacement A1200 k/b w/ribbon cable*	24.95
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VID-CKT	Cocktel Amiga videoconferenc'g s/w by ProDad	39.95

(* NB items subject to mechanical wear & tear are limited to 90 days warranty on those components)

Accelerators: PowerPC with 680x0 Co-processor

ADPT-VGA-BV4M-SP	BVision 4MB A1200 gfx card pur w/ PPC acc	149.95
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ACC-PPC-16-4025	Bliz'd PPC603/160MHz+040/25/FPU/ no SCSI	238.95
ACC-PPC-16-6050	Bliz'd PPC603/160MHz+060/50/FPU no SCSI	448.95
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ACC-PPC-24S-6050	Bliz'rd PPC603/240MHz+060/50/FPU/SCSI-2	618.95

Accelerators: Apollo 680xx

ACC-060-66	Apollo '060 MMU/FPU 66MHz A1200 acc (lim avail)	337.95
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ACC-040-40	Apollo '040 MMU/FPU 40MHz A1200 accel	187.95
ACC-040-33	Apollo '040 MMU/FPU 33MHz A1200 accel	157.95
ACC-040-25	Apollo '040 MMU/FPU 25MHz A1200 accel	127.95
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ACC-30EM-25	Apollo '030/25MHz/MMU no FPU (8MBmax)	54.95
ACC-30LC-25	Apollo '030/25MHz/MMU/FPU (8MBmax)	64.95
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SYS-SIA-ETH	Siamese sys2.5 w/PC,Amiga ethernet	189.95
SYS-SIA-R25	Siamese system software RTG v2.5	99.95
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EYETECH

Whither Workbench 3.5?

Workbench

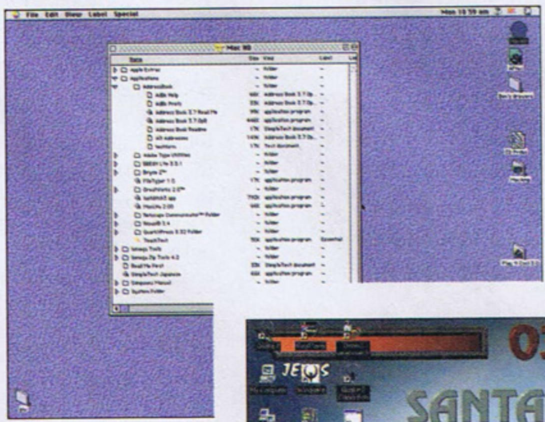
The big news is that Workbench 3.5 has been given the go-ahead from the big bosses at ***Gateway***, but is it needed or wanted? **Ben Vost** investigates.

A good number of years have passed since Workbench for the Amiga was last updated. The final release of the software as a third party product licensed from Commodore, produced by Village Tronic, came in 1993, just in time for the Cologne show that year. With Windows being updated three times since then, and the Mac receiving umpteen improvements in that time, you'd think that the Amiga would have been left far behind.

Of course, you'd be forgiven for thinking that was true considering the lack of life from the various owners since that time, but the real movement in the Amiga's OS hasn't come from its owners in the last five years, it's come from the people best placed to make improvements – its users. In the five years that have passed, Workbench has been patched and hacked more than any other bit of software available for the Amiga (and probably for any other platform, with the possible exception of the *Unix* variants).

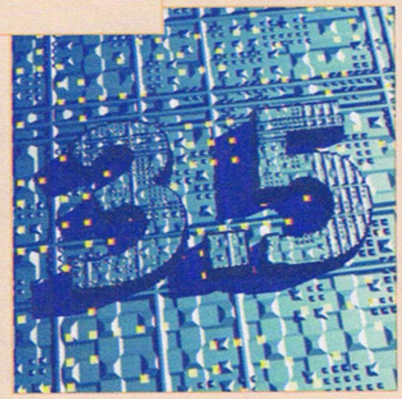
What was once considered impossible is now routine on our platform, thanks to its superior flexibility and ease of programming and use. True-colour displays, multi-colour icons and 16-bit audio were all beyond Workbench 3.1 in 1993, but they are no longer. In fact, people with a bog-standard WB3.1 machine, an unexpanded A1200 for example, might be surprised at just what is possible with an Amiga, given a small amount of tweaking and money.

Although a few newer utilities like *SetPatch* and the 040.library have come from the Amiga warehouse, there hasn't been any other development – its all been left to third parties. The problem is that Workbench is now no longer a standard, as is the Mac's OS or Windows95. People just waited for new features with those OSes. The Amiga is slightly different. Everyone has applied their favourite patches to their own systems in such a way that there can be few Amigas that are identical, except those that have never been upgraded.



This isn't necessarily a bad thing, but it can make life harder for the user and the software writer, making sure that it isn't a bad hack that's causing the problem with their new software rather than the new software itself being at fault. The situation becomes even worse when complete Workbench replacements like *Directory Opus* or *Scalos* are being run as standard – keyboard shortcuts do the wrong thing and the humble directory window has been updated out of all recognition.

The upshot of the whole situation is that third party upgrades now have as much "right" to Workbench than any other part of the official OS. People certainly wouldn't want to do without *MCX, MCP, Directory Opus* or their many other add-ons. It's not even as if they are all cosmetic additions to the OS, like *NewIcons* or *VisualPrefs*. Things like *MCP* add vital missing components to an old-fashioned operating system in order to make it as up-to-date as possible.



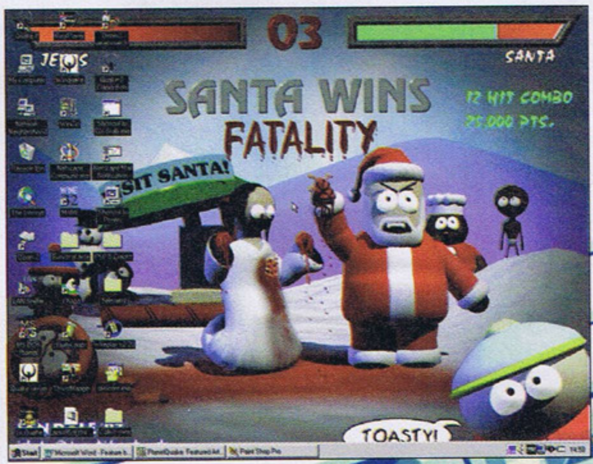
PATCHES

But this begs the question of what Workbench 3.5 will actually consist of. If it's just patches to the OS, like those provided by *MCX, CycleToMenu* and the rest, what will be the benefit of upgrading to it?

> "...Workbench has been patched and hacked more than any other bit of software available for the Amiga..."

Workbench 3.5 will need to provide a lot more than these add-ons in a more integrated way if it is to sell in the numbers that Amiga Inc. need to see from it.

The opposition: Mac OS 7 and Windows95 form the main competition for Workbench 3.5.



There have been plenty of suggestions from concerned users about what needs to go into a new revision of the OS and we'll take a look at some of the ideas over the next few pages. It's also important to bear in mind some of the more hidden details that people talk about but which aren't commonly understood, like memory protection or processor independence.

We'll cover these too, along with the opinions of famous Amigans and those that frequent the *Amiga Format Bulletin*. See? There's another good reason to be on the net! You can subscribe simply by sending mail to af-bulletin-request@futurenet.co.uk with "subscribe af-bulletin" in the body of your mail.

And if there's no update to Kickstart, as mooted, then the amount of expansion that Workbench will receive will be limited. There'll be no access to hard drives larger than 4.3Gb, no colourful icons as standard, no built-in retargeting of graphics, sound or ports. There's still plenty to do though, simply with regard to replacing the commodities and patches that are weighing down your system, and adding to the functionality of Workbench.

And yet, instead, a lot of that work is being done by outside agencies operating completely independently from Amiga Inc.

INDEPENDENT SOFTWARE

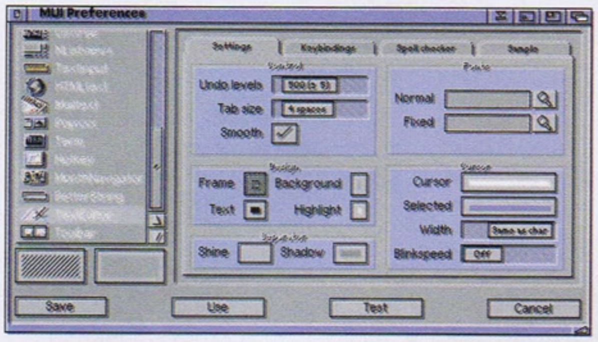
Take Martin Berndt as an example. Not only has he created one of the best-known CD-ROM FS packages doing the rounds in *AmiCDFS*, he's also designed *MultiCX* and has added new features to it as users requested them over the past few years. Most recently, he has announced a commercial package for the Amiga to allow memory protection, called *BodyGuard*, which should be available by the time you read this.

Singlehandedly, he's probably "upgraded" Workbench more effectively than any Amiga company employee over the past five years.

Then there's Stefan Stuntz's *MUI*. A lot of people really dislike this GUI API, but without it a lot of Amiga software would never have appeared because *Gadtools* just isn't up to the job.

There are problems with *MUI*. For example, the user interface only has the same priority as the program it is running, which means that you get those annoying pauses where you don't

Continued overleaf ➡



Stefan Stuntz's *MUI* forms the GUI for a lot of modern Amiga software.

know if anything's happened. However, it adds things that were never possible in the original Workbench and, what's more, it's extensible. Sure, it's awkward to configure, but then that's because you can configure so much of *MUI* to your own taste that it makes it hard to make it simpler, if you see what I mean.

> "Workbench 3.5 will need to provide a lot more than these add-ons in a more integrated way if it is to sell…"

Okay, so they are just two of the people who are making it harder for Workbench 3.5 to have a proper impact the way that Windows95 did when it was released, but there are two points to remember. Firstly, without these developments there may have been no-one around to upgrade to Workbench 3.5. Secondly, as all these third party add-ons aren't included with the system, there's no guarantee that people will be running them.

This means that they'll benefit from some of their functionality being added to the system (those with these programs will also benefit because that'll be one less patch or commodity to run and keep updated).

The upshot is that Workbench 3.5 is a valid endeavour, but only under conditions that don't preclude the operation of existing software and actual enhancements to the way people can work.

Let's cover some of the things that a lot of people have said are necessary for a new Workbench to be popular:

■ BETTER PREFS

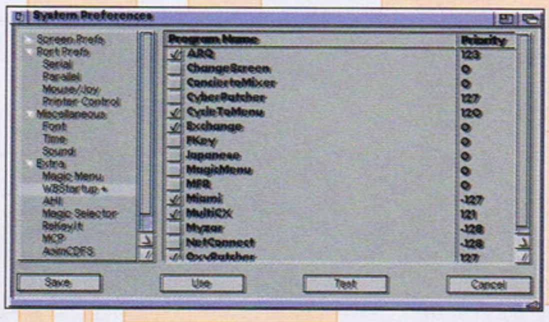
The various preferences programs are looking a bit tatty these days and they don't really offer the options that are needed now. The dire printer preferences programs and the fact that Screenmode prefs doesn't handle screenmodes with more than 256 colours with good grace are good examples of this.

These need to be overhauled, and perhaps even brought into a single editor, more like the *MUI* preferences where new preference programs can simply be added to the list of settings, rather than having a new program visible (it would also help with the visual consistency of the various prefs).

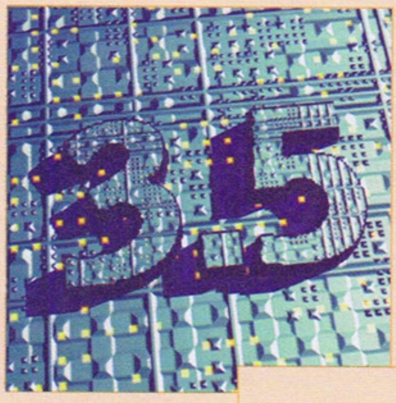
Another topic which should be addressed is the lack of a central *MIME prefs*-type of program. At the moment, Amiga users have to set up different default tools for every project they create. It would make more sense if there was one default tool (perhaps even getting rid of the default tool part of the icon info) like *AFCDPrefs,* that used whatever viewers you had set up.

COMPATIBILITY WITH OLDER WB: High. As long as programs use preference settings rather than hitting the hardware directly.

LIKELIHOOD OF APPEARING IN WB3.5: High. There should be some sort of *MIME prefs,* and possibly a universal addressbook application. It remains to be seen whether the other preference programs get an overhaul.



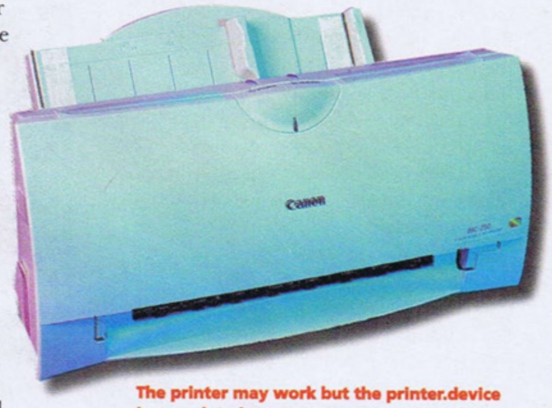
Just a mock-up of how Preferences could look. Note that the Extra submenu is full of third party preference programs.



MEMORY STUFF

Although there are lots of issues to do with memory protection, virtual memory and the like, we don't really have the space to go into them here. However, as luck would have it, our very own Simon Goodwin has been busy writing about such things and you can read up on the pros and cons of memory protection and other topics in his Under The Bonnet tutorial on page 80.





The printer may work but the printer.device is very dated now.

■ NEW PRINTER.DEVICE

Printing on the Amiga is much like the built-in sound, two things which haven't really changed since the Amiga was invented back in 1985.

Although the sound side of the Amiga is quite well catered for with *AHI*, getting rid of the current printer.device is trickier than a Rubik's Cube with all the sides painted black.

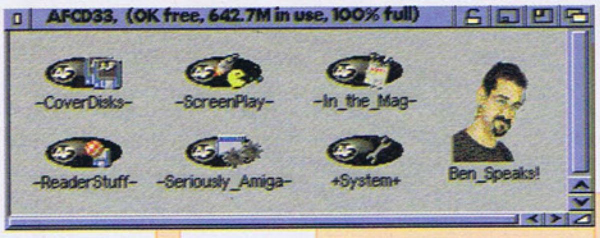
The two main patches we have for it right now, *Studio* and *TurboPrint*, are both hacks that bypass printer.device, but they're hardly implemented in a system-friendly way (through no fault of their own). We really need a new one that gets rid of the 4096-colour limit, allows for spooling and can address ports other than the built-in parallel (or serial) port. Realistically, we also need support for things like EPP and USB built-in to allow hardware manufacturers to create cards (like the *IOblix*) with these kind of ports to allow access to the very latest peripherals.

COMPATIBILITY WITH OLDER WB: It's likely that programs would need an update to cope with the new printer.device, unless the name is kept and redirected by Workbench itself.

LIKELIHOOD OF APPEARING IN WB3.5: Slim. Not because it needs a Kickstart modification, but because it's a lot of work.

■ BETTER ICONS

NewIcons is now an overwhelmingly popular icon scheme for the Amiga



NewIcons are very popular but they're not exactly a standard way of implementing icons.

(our polls indicate a ratio of nearly 2:1 in favour of *NI* these days), but it's still a hack and its authors recognise this fact.

Above all, they wish that there was no need for *NewIcons,* and how right they are. A new icon system for Workbench 3.5 needs to offer all that *NewIcons* does – palette mapping, the ability to mess with borders, filenames and more – but as a standard system add-on rather than a hack.

It needs to share the same easy way of creating and updating icons, which means that we also need an updated icon information window (something more like *SwazInfo,* say) that can create icons and manipulate them more easily.

COMPATIBILITY WITH OLDER WB: It really needs to be 100% compatible. After all, there's not much point in having a GUI operating system if you can't see anything in it, is there?

LIKELIHOOD OF APPEARING IN WB3.5: Slim. It will require reconfiguration of the icon.library which is in ROM.

BIG HARD DRIVES

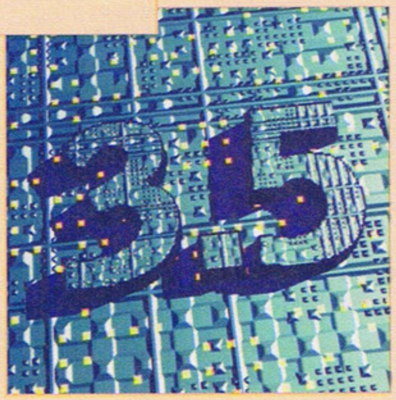
When we talk about big hard drives, I mean the ones larger than the 4.3Gb limit currently imposed on Amiga hard drives. This might seem somewhat difficult to justify since there are very few users who actually need this kind of space on the Amiga, but then why should we be limited in any way?

COMPATIBILITY WITH OLDER WB: Should be fine, unless there's a severe modification of FFS.

LIKELIHOOD OF APPEARING IN WB3.5: Slim, since you can already apply patches to FFS, but you have to boot from a standard partition first. For this to be achievable there would need to be a new version of Kickstart.

PPC SUPPORT OR NATIVE PPC WB

Although Amiga Inc. have denied any link with the PPC now, there is such a strong grass-roots movement towards this processor that it's hard to imagine they can ignore it for this Workbench upgrade. The question is, how will it be implemented?



There are two routes to take. The first is to offer a 68K emulator so that the best part of Workbench 3.5 will run on the PPC. This will cut down on the number of awkward context switches between the PPC and 68K processors which slow down the current crop of PPC accelerator cards dramatically. This is what Apple did and only recently have they made a specific, native version of the operating system.

> "Although Amiga Inc. have denied any link with the PPC now... it's hard to imagine they can ignore it..."

However, thanks to the increased amount of knowledge about the two processors that we have today, and the increased amount of optimisation that can be carried out, there's no reason for an Amiga 68K emulation to be as slow as the Mac's originally was.

Unfortunately, moving significant portions of the OS across to the new processor is a much harder task given the time constraints that have to be applied to WB3.5, and even getting the machine to boot without a 68K processor is going to be tough.

COMPATIBILITY WITH OLDER WB: Hmm, tricky. It should have no problem since the only easily foreseeable difficulty is going to be trying to run a 68K emulation on a 68K processor. Whether or not the emulation offered by Haage & Partner is complete is another matter.

LIKELIHOOD OF APPEARING IN WB3.5: I think we're likely to see some sort of 68K emulation. This needs to happen so that the next generation of PPC cards can come out – G3 accelerators with no 68K chip on them will not only still be fast with 68K emulation, but they'll be blindingly fast native and shouldn't be more expensive than current solutions.

RETARGETABLE GRAPHICS, AUDIO AND PORTS

Although we have CyberGraphX, Picasso96, *AHI* and various redirection schemes for the ports on the Amiga, we really need a standard to work to that allows the Amiga to become completely device independent transparently.

If I have a multi-parallel card on my Amiga then I don't want to have to run some sort of patch program to redirect output to my printer from the built-in parallel port to my extra one. I'd like to be able to set that up in preferences and the same goes for serial ports, sound cards, graphics cards and the like.

COMPATIBILITY WITH OLDER WB: To be truly transparent, these schemes need a clear API that programmers can work to, rather than hitting the hardware. It's therefore doubtful that older software will take advantage of the features that they offer.

As an example, look at older music software that assumes a MIDI port is going to be connected to the built-in serial port, or older versions of *DPaint* which assume what the screenmodes will be called, rather than offering a menu of possible modes.

BETTER FILE HANDLING

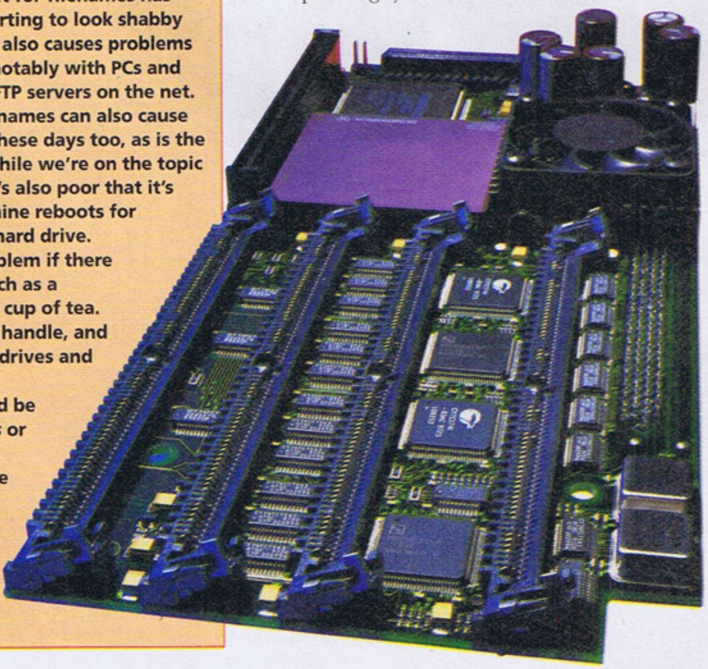
Although the Amiga's 30 character limit for filenames has always been a boon in the past, it's starting to look shabby against Windows95's 254 characters. It also causes problems when moving files between systems, notably with PCs and the *Unix* boxes that are often used as FTP servers on the net.

The fact that putting spaces in filenames can also cause problems is somewhat old-fashioned these days too, as is the poor handling of foreign characters. While we're on the topic of what sucks under the current FFS, it's also poor that it's slow and has problems when the machine reboots for whatever reason while writing to the hard drive.

Validation wouldn't even be a problem if there was some warning it was going on, such as a requestor to tell you to go and make a cup of tea. Realistically, FFS should be updated to handle, and boot from, CD-ROM drives, removable drives and other such modern niceties.

COMPATIBILITY WITH OLDER WB: Should be good, but programs like *AmiBack Tools* or *DiskSalv* will probably cease to work, leaving the Amiga without a hard drive repair program.

LIKELIHOOD OF APPEARING IN WB3.5: Slim. Once again, it will probably need a modification to Kickstart in order for it to be available on all drives as standard.



Will the PPC feature highly in WB 3.5?

Continued overleaf ➡

LIKELIHOOD OF APPEARING IN WB3.5: Slim. There's a lot of work to be done here and I'm not sure that it wouldn't mean a Kickstart overhaul.

BETTER FONT SUPPORT

Fonts are a mess on the Amiga right now. Workbench only understands bitmapped and Compugraphic fonts, *Scala* needs bitmaps, *PageStream* wants to work in *Postscript* and *Final Writer* uses its own format called *NimbusQ*!

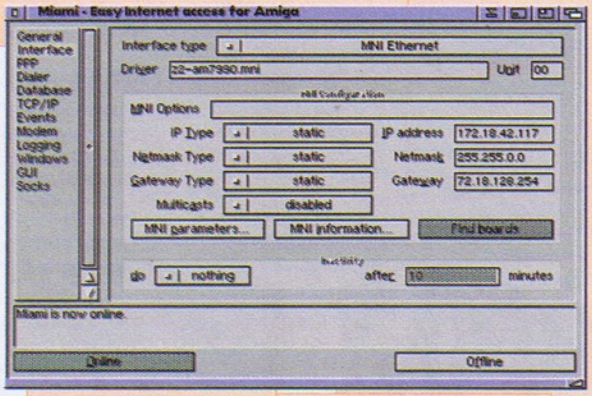
If you want those nice fonts you use in *Scala* to be available in *PageStream*, you can use them but they'll come out horribly when printed, and you won't be able to use *Final Writer*'s fonts in Workbench. *PPaint* can get on with the Compugraphic fonts you have, but it's harder to get others and why would you want to when you already have fonts coming out of your ears?

A nice solution would be system-wide *PostScript* or TrueType fonts with bitmaps for speed. The computer would give you a bitmap font if one existed in the size you wanted to use, otherwise it would create one on the fly from the scalable fonts you had.

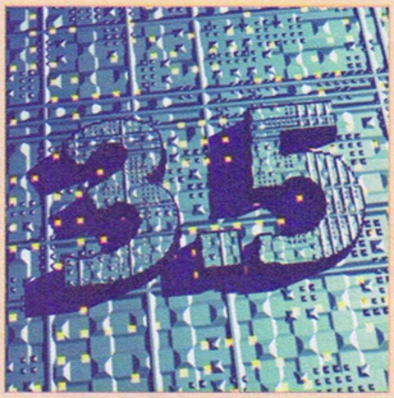
COMPATIBILITY WITH OLDER WB: It depends on how well the font system in older applications has been done. Hopefully it should be transparent to the user, but I can see problems with certain types of program, like *Amos*.

LIKELIHOOD OF APPEARING IN WB3.5: Middling. It wouldn't necessarily require an update to Kickstart (although one would make it faster).

> "The computer would give you a bitmap font if one existed in the size you wanted to use, otherwise it would create one."



Miami is a great TCP stack, but it isn't enough for Workbench 3.5.



NETWORKING

We're not talking about bunging some TCP stack into the mix and saying that Workbench now has networking. We need the ability to print over a network, connect two machines together simply and efficiently and view other drives as though they were mounted on our machines. With this in mind, we will also need added security functions, such as allowing for password boot protection that can't be circumvented by booting with no startup.

Not only does Amiga networking need to be transparent to Amiga users, it should also enable talking to other platforms as though they were much better machines.

COMPATIBILITY WITH OLDER WB: Should be no problems, although the current TCP stacks will probably be unnecessary then.

LIKELIHOOD OF APPEARING IN WB3.5: Because this topic is tightly bound into other topics, such as a better printer device, better file handling and so on, it's unlikely to appear as I've suggested. There may be some movement towards what is needed and we might have to be content with that for what is, after all, an interim upgrade of Workbench.

MISCELLANEOUS STUFF

There are loads of little tweaks that Workbench could do with – just have a look at the features list for *MCX*, *MCP* and others to see what could be added. There should also be a more friendly (or useful) guru. Instead of having cryptic numbers, it would be nice if we could be told exactly what crashed the machine and why.

Cycle gadgets could be binned in favour of pop-up menus and other gadgets should automatically have a 2:1 or 1:1 aspect ratio border so that they look right on all screenmodes.

COMPATIBILITY WITH OLDER WB: Should be full as we've got all these things already.

LIKELIHOOD OF APPEARING IN WB3.5: High. Most of these patches are already on a lot of people's machines so it shouldn't prove too difficult to implement them into Workbench, even without a Kickstart upgrade.

IN CONCLUSION

What we have outlined here is an ideal scenario for WB3.5, tempered with realism. However, as we go to press we hear that OS3.5 has been partially announced by Bill McEwen at the Midwest Amiga Expo.

The keynote address he gave contained small hints of what will be in this version of the OS (see the news pages for more details), but he also stated that the new OS would not need a new ROM. This makes a lot of the improvements we've detailed here impossible in some cases and very difficult in others. Sadly, this section is also the most important as it contains the most needed upgrades, such as support for larger hard drives and better compatibility with removables and CD-ROMs. Oh well.

Bill also said that this upgrade would contain PPC compatibility, which is a good sign for those of you with new Blizzards or CyberStormPPCs, and that the development of Workbench 3.5 would not slow the work on OS5. This is good news since Amiga Inc. still plan on releasing the new Amiga in the fourth quarter of next year – yes, next year!

I guess the real question is whether or not you feel an upgrade is worth it. We don't know exactly what is going to be in OS3.5 as we write this, so we can't directly say whether an upgrade is going to be worth the cash. However, we do know that Amiga Inc. are relying on sales of this upgrade to justify continued development of the classic Amiga range, rather than simply sinking all the development cash into the new machine.

Since there has been no further news on exactly what the new machine will consist of, or what software will be available when it finally gets released, we can only assure you that getting Workbench 3.5 will be essential to the furtherment of the machines we currently use.

A LOOK TO THE FUTURE

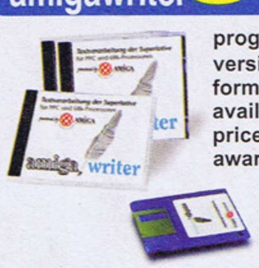
This feature has been about the next version of the OS, Workbench 3.5, but we would be remiss if we didn't give our opinion on the future of the Amiga.

You've seen what Fleecy Moss had to say on the subject of digital convergence in last month's feature and we'll no doubt be learning more and more about what OS5 holds for us over the next year, but as a wild bit of speculation, imagine a computer that's as easy to use as your house is.

You see, the ideal is that a computer is easy to use, while it is also the single most complicated thing that each of us possesses. This makes it hard to make it simple, but the way the Amiga works is getting there, although it's currently stuck in computer-y terms.

In two years you'll be able to tell people that you remember when computers were hard to use, while *AF* won't need a Workbench section.

amigawriter new £49.95



program : amigawriter
version : v1.0 (english version)
format : floppy disks
available : yes
price : £49.95
awards : amiga magazine (DE) 87% 'very good'.

AmigaWriter is the newest word processor (or word creating) package for the Amiga. Officially ratified by Amiga International, thus supported by the "*Powered by Amiga*" logo, AmigaWriter contains some unique features for Amiga word processors: platform independent (full support for commercial, shareware or freeware plugins), ease of use (easy selection, true WYSIWYG, very Amiga-alike in action), full paragraph control, page formatting, chapter management, support for different image formats and much more. AmigaWriter is almost similar to a DTP program, allowing full box control over text and image placing within your document. All version 1 users will receive the forthcoming PPC version and version 2 free of charge!

- *PowerPC version inclusive in the price* - in development, due in v1.x, available free of charge
- *Flexible box layout concept* - design your pages in true DTP style
- *Support for external image formats* - support for IFF and JPEG and any other image via datatypes!
- *Extensive plugin support* - expect commercial, shareware and freeware plugins
- *Free update to v2 (due 1999)* - postscript/truetype fontengine, spell checking, form editor, table editor and MS Word import filter and much more.

netconnect v2 £59.95



program : netconnect
version : v2.0
format : cd-rom or floppy disks
available : yes
price : £59.95
awards : amiga format gold, 96%, cu amiga 94%

The award-winning **NetConnect v2** is the easiest and most comprehensive Internet compilation designed to enable any Amiga user, from novice to expert level, to get onto and use the Internet. By using the new Genesis Wizard, a user should be able connect to the Internet in a matter of minutes. Containing Genesis, Voyager-NG, Microdot-II, AmIRC, AmFTP, AmTelnet, AmTerm, NetInfo, AmTalk, X-Arc and the Contact Manager. Ideal for both an Internet or local area network connection.

- *Eleven Commercial Programs* - contains the highest quality Internet software, all commercial versions.
- *Truly Integrated* - the beauty of NetConnect v2 is the integration. Contact Manager works with Microdot-II, Voyager, AmIRC and more. Centralised MIME preferences works between all the programs.
- *Flexible Dock Bar* - setup and launch all your software from this advanced and flexible tool bar
- *Aimed Towards Beginners Through to Advanced Users* - NetConnect v2 is simple enough for the beginner to use to connect to the Internet for the first time, but powerful enough for the advanced user who may require a dialup connection and local area network (LAN).
- *Award Winning* - Amiga Format Gold (96%), CU Amiga Superstar (94%)
- *Expandable* - software works with external programs. The Contact Manager works with IBrowse, YAM v2 r6, STFax Professional. Genesis is supported by WebTV, AmICQ and more.

stfax professional £29.95



program : stfax professional
version : v3.5
format : floppy disks
available : yes
price : £29.95
awards : amiga format gold, 95%, cu amiga superstar, 95%
amiga magazin (DE) 89%, Amiga Plus (DE) 96%

STFax Professional is a commercial fax/voice message program which enables you to use your Amiga as a digital answermachine. Ever wondered how companies manage to create their voice based operator system? You can do this at home or in a small office! ie. 'Press one to leave a message for Mike or press two to leave a message for Sue'. Setup a fax on demand service, advanced message box system for family members, log numbers via caller-ID, call screen or blacklist phone numbers, control other programs etc.

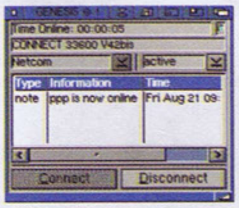
- *Full fax modem support (class 1, 2, 2.0)* - fax from your favourite Amiga software
- *Advanced voice capabilities* - use your Amiga as a digital answermachine
- *Support for the PACE Solo, 3-Com Message Plus or Kortex Adaptix Independent Operation mode*
- *Mini-BBS* - setup your own small BBS

Special Offer: Buy NetConnect v2 and STFax Professional together for only £69.95!

genesis £29.95



program : genesis
version : v1.0
format : floppy disks
available : yes
price : £29.95
awards



Genesis is a new TCP/IP stack for the Amiga computer, allowing both dialup Internet access and local area networking, with the advanced facility to run more than one interface at one time (ie. keep your ethernet network connected, whilst putting your dialup connection on and offline - ideal for Siamese users, LAN'ing one or more Amiga's or an Amiga to PC/Unix/etc). *Genesis* ships with an easy to use Wizard. Simply enter some basic information about your provider and the Wizard goes online and gathers the advanced information. The status window (shown here) allows you to control the interfaces and shows the connection speed, the time you have been online and which interfaces are connected. *Genesis* is supplied with an advanced time and cost logger so you can see how much time you have spent on the net and the costs involved.

ACTIVE

Oval House, 113 Victoria Road, Darlington, DL1 5JH

Tel : 01325 460116
Fax: 01325 460117
E-Mail: sales@active-net.co.uk
http://www.active-net.co.uk

Delivery Information

S'Ware	- £1.00 for UK delivery - £1.50 for EU delivery - £2.00 World delivery
H'Ware	- £6 for UK next day delivery (serial cards charged at £3 for standard delivery)

Make cheques/P.O.'s payable to Active Technologies and send to the address listed opposite. Credit/debit card payment accepted. For any additional information contact us.

isdn terminal adaptors from.. £129.95

With the launch of BT's 'Home Highway', ISDN is now affordable for the home user. Our branded Dynalink 'MagicXpress' modem (as featured in this issue) enables you to connect to the Internet at blazingly fast speeds (you must also have a high speed serial card to use ISDN). So, what does ISDN offer the average home/Internet user:

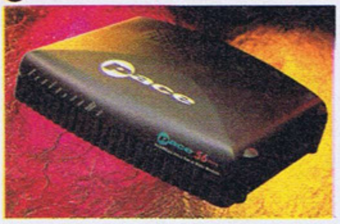
- *Digital connection* - no line speed fluctations (unlike normal modems), connect at 64K and you stay at 64K, instant (half or one second) connections and the clearest possible phone/data lines!
- *Upto 4 times as fast as 56K* - surf the net at 64K or 128K (using both lines), meaning that large files or web sites are downloaded at the fastest possible rate (74 seconds for a 1MB file @ 128K ISDN connection, compared to 4.16 minutes for a 1MB @ 44K on a '56K' modem).
- *Upload at 64K or 128K* - the main difference between ISDN and a 56K modem is that you can upload files at ISDN speeds, whereas a 56K modem uploads at 33.6K maximum.
- *Two lines* - use both digital lines for 128K connections, use one line for telephone calls whilst using the other line for a 64K Internet session! Why not connect two computers to either line or simply make phone calls on both lines at the same time?

Code	Pack Contents	£ Prices
ID01	External ISDN Terminal Adaptor (TA)	£129.95
ID02	ISDN TA & NetConnect	£159.95
ID03	ISDN TA & NetConnect & Hypercom 1	£189.95
ID04	ISDN TA & NetConnect & IOBlix Serial Card	£229.95

high quality modems from.. £79.95

Choose from three high-quality branded modems - the top of the range, award winning PACE 56K, the new PACE 'Solo' 56K or the middle of the range Dynalink 'MagicXpress' modem (same colour as your Amiga). All ship with a five year warranty. The PACE modems also ship with free lifetime technical support, UK caller ID (only modem available which supports this), a superb speakerphone, conferencing feature, volume slider/control, easy to understand LED's and non-technical, easy to read documentation. All PACE and Dynalink 'MagicXpress' 56K modems are now v90 shipping ready - the agreed standard for 56K connectivity. Why not treat yourself to the brand new PACE 'Solo'? The 'Solo' be used standalone from your Amiga. Want to go on holiday but need to receive fax and voice messages, but don't want to leave your Amiga running? The 'Solo' is the answer.

pace External 56K Modem



pace 'Solo' 56K Modem



Dynalink 56K External Voice/Fax/Data Modem	£79.95
PACE 56K External Voice/Fax/Data Modem	£119.95
PACE 'Solo' 56K External Voice/Fax/Data Modem	£189.95

modem pack options from.. £89.95

Various money saving packs are available. These are all based on the Dynalink 56K modem. Packs based on PACE 56K or PACE 'Solo' 56K modems available as an additional cost option.

Code	Pack Contents	£ Prices
PK01	56K Modem & STFax Professional	£ 89.95
PK02	56K Modem & NetConnect	£109.95
PK03	56K Modem & NetConnect & STFax Professional	£119.95
PK04	56K Modem & NetConnect, Hypercom1, STFax Pro	£154.95
PK05	56K Modem & NetConnect, IOBlix Card, STFax Pro	£189.95

ADD £35 for a PACE 56K Modem (instead of the Dynalink 56K)
ADD £100 for a PACE 'Solo' 56K Modem (instead of the Dynalink 56K)

- All packs come with one month free connection to Demon Internet and/or UK Online
- Choose between the CD or Floppy disk version of NetConnect v2 with your modem pack

high speed serial cards new from.. £39.95

The new *IOBlix* card offers 4 high speed serial ports and 2 high speed EPP/ECP parallel ports to your Zorro based Amiga. The serial ports provide 64 bytes of FIFO memory, which is also upgradable. The parallel ports offer both uni and bi-directional modems, offering compatibility for all printers. Scanner drives and drivers for backup devices (ZIP etc) are planned for the EPP/ECP mode. The *IOBlix* also has a modular interface. Two modules are currently being developed: an AHI-compatible sound card and a SANA-II compatible ethernet module. The *Hypercom* high-speed serial cards are available for the A1200 (uses internal clock port), offering an extra serial and parallel (Hypercom 3) port.

Model	Machine	Specifications	Price
Hypercom1	A1200	1 x 460,800bps highspeed buffered serial port	£39.95
Hypercom3	A1200T	2 x 460,800bps highspeed buffered serial ports, 1 x 500K bytes/sec parallel port	£69.95
IOBlix	Zorro-2/3	4 x 460,800bps highspeed buffered serial ports, 2 x uni/bi 500k parallel ports	£89.95

miscellaneous software

Various other individual software titles are available. These titles may be interesting to those not wanting to purchase NetConnect v2.

	By Disk	By EMail
Scalos - workbench replacer with advanced features	£17.00	£15.00
Voyager Next Generation	£22.00	£20.00
Microdot-II v1.1 (release) - email and news client	£22.00	£20.00
AmIRC	£22.00	£20.00
AmFTP	£20.00	£18.00
AmTalk	£17.00	£15.00
X-Arc - system archive management tool (handles lha, lzx and zip archives)	£14.00	£12.00
Contact Manager - system addressbook, works with many net/comms programs	£12.00	£10.00
AmTelnet + AmTerm Package Deal	£20.00	£18.00

- *5% Discount when 2-4 Vapor products are bought, 10% Discount for 5+*

internet informer issue 3

The latest issue (issue 3, out Autumn 1998) of our *Internet Informer* magazine will be available soon. Wanting to learn more before you connect to the Internet? Still unsure about the costs involved, what hardware you need or what you, as an Amiga user, will obtain from being connected to the Internet? The *Internet Informer* gives you this information, extra product specifications and more.

Cologne Show Preview

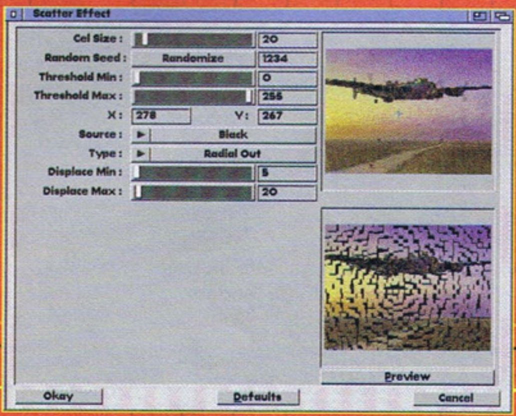
With the world's biggest and best Amiga show almost here, we bring you a sneak look at who's going to be displaying what…

Nova Design

One of the most important American developers will be at the show, demonstrating *ImageFX* and *Aladdin 4D*. *ImageFX* has gone through a few updates since it was last reviewed in *Amiga Format*, and all of the problems raised in that review have been addressed.

Nova Design will also be demonstrating some new add-ons for the software, allowing easy connectivity between it and the *Wildfire Effects* package. Also, the *ImageFX* demo videos will hopefully have made it to PAL in time for the show.

As ever, Kermit Woodall will be on hand, demoing the software and demoing effects which will leave passers-by unable to.

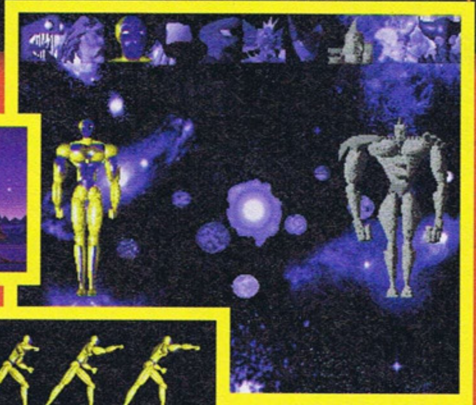


ImageFX will really be shown off to its full potential in Cologne.

Ologram

Olofight, the first full-on beat-em-up for the Amiga for a long time, will be on display at the show. Hopefully it will have found a distribution deal for the UK by then too.





Giant fighters battling it out in a futuristic setting – I hope it's not like *RotR*!



Fully 3D rendered – uh oh, wasn't that what they said about *RotR*?

Schatztruhe

The German CD specialists will be attending the show with their complete range of products (Aminet, *PFS 2*, *Studio Professional*, *Amiga Forever 2.0*, *Developer CD* and more), available for presentation as well as for sale.

There will also be several new releases at the show, including Aminet27, the Aminet Set 7, *DOpus Magellan II*, *DOpus Plus* and *CyberGrapX v4*.

One of the most interesting new packages they will be demonstrating is *Amiga BodyGuard*. This is a complete memory protection system for the Amiga which promises to significantly reduce the problems you may have with naughty software, not to mention preventing many potentially disastrous system crashes.

The good news for attendees is that they will get a much better deal at the stand. "As always we are going to sell all our products at special show prices!" says Stefan Ossowski.



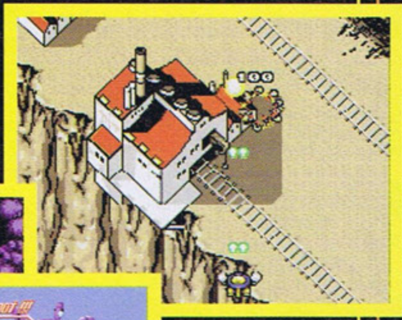
DOpus Magellan II looks to offer as many new features as the original did last year.



APC&TCP

This club has turned into a noteworthy group of developers and they'll be taking a stand at the show to display their latest wares, including:

- DEKUBI CD-ROM
- Amiga Times CD-ROM
- The Best of Scene Archives #1 CD-ROM
- *The Games Attack* CD-ROM
- *Pulsator* (CD-ROM version)
- *GunBee F-99*
- *Marblelous 2*







We liked GunBee a lot this month, so let's hope they've got more to show!

You'll also be able to see a demo version of *Phoenix*, and they should have a beta version of their upcoming title, *The Adventure Shop*, for you to play around with.

Titan

Titan have these new software titles planed for the Cologne show:

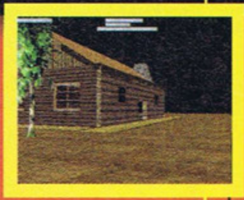
- *Art Studio 4.0* (picture cataloguer)
- *Burn IT 2.5* (CD recording)
- *Candy Factory Pro* (image processing)
- *Fantastic Dreams* (real-time morphing, the follow-up to *Elastic Dreams*)
- *Motion Power Effects* (PPC effects for *MovieShop*)

Their new games will include:

- *Evil's Doom SE* (RPG)
- *Claws of the Devil* (*Tomb Raider*-style adventuring)
- *Settlers II* may also be making an appearance.

All their products have full PPC, graphics card or Cyber/BVision support, as well as support for AGA for those with lower-end systems.







If it looks as good as this, *Claws of the Devil* may well be the game of 1999.

Amiga Oberland

Oberland Computer will be demonstrating their new raytracing package, *Monzoom*, for standard and PPC Amigas. The new version of *Wildfire* (version 7) will also be on display, as will the products of Nova Design, which will be shown at the Amiga International booth. They will also be selling a complete range of hardware and software.

Coolbits

Coolbits will be displaying and selling software from Vulcan Software on their stand.

Eagle

Eagle aren't attending this year's show but their products will be displayed by Oberland Computer and Vesalia Computer.

Their latest software includes the Amiga eagleLINUX M68K, a brand new OS for the Amiga, the Amiga eagleLINUX M68K Update and the Amiga P-OS Pre-release, another new Amiga OS.

The hardware which they'll have on display will include the Amiga A4000TE Barebone designer tower, which has an A4000T mainboard, 16Mb RAM/2Mb chip, 1.76 Mb high density drive, 3.1 Kick ROM and handbooks. The M68K Linux/P-OS Pre-release is also included with the package.

Irseesoft

The main new products on the Irseesoft stand will be *Turboprint 7* (distributed by Wizard in the UK) and *Picture Manager 5.5* (distributed by Blittersoft in the UK).

The main new features in *Turboprint 7* are:

Postscript-Interpreter:

- You can print any *Postscript* or *PDF* document.
- Higher printing speed from *FinalWriter*, *Wordworth* and *PageStream*.
- 24-bit printing from *PageStream*.
- No more wrong margins on printouts.

There will be a text mode for printers that can only print graphics, for example, the Epson Stylus Color 300 and the Canon BJC 7000. This means you can have a text mode with scalable CG Fonts from Workbench for any printer.

Improvements in the Graphics Publisher:

- Zoom mode.
- Correct margins (you don't have to enter them manually any more).

There will be a much higher printing speed, especially from *DrawStudio* software.

Improvements to the Spooler:

- Can print copies now so the application doesn't have to send the same page several times any more.

New printers (this list is not final – some printers may be missing, some may be added):

- Epson Stylus Color 440,640,740,850.
- Epson Stylus Photo 700, EX.
- HP DeskJet 1100,1120,2000.

Continued overleaf ➡

Computer 98

Exhibitors Index

COMPANY	STAND	PRODUCTS
ACT Albrecht Computer Technik	F43	Amiga hardware/software/music software
ACT Electronic GmbH	C44/D45	Amiga hardware
Amiga International Inc.	D42/E43	Amiga hardware/software/operating systems
APC & TCP Computer & Vertrieb	D37	Amiga computer club
Byte Express	G38	Specialist journals/CD-ROMs/tools and utilities/peripherals
Canon Deutschland GmbH	E26/F27	Scanners/notebooks/printers/colour ink cartridges/ribbons
Case Logic GmbH	C56	Peripherals
CD-ROM Shop Gehrke	D2	Consoles/games/specialist journals
CFS Amiga-Versand	D33	Amiga hardware/ software/Amiga operating systems
ComPoint GmbH	B44/C45	Communication hardware/disk drives/peripherals
Coolbits	D47	Amiga hardware/software/video imaging software
Epic Marketing	C48	Amiga games
G.I.B. Verlag GmbH	C24/D25	Software
Grünhof-Verlag	E44/F45	Amiga graphics software/PC graphics software
Haage & Partner	C34/D35	Video imaging software/graphics software
Hans-Dieter Knauer Elektronik	D57	Soundcards/computer cables/joysticks/etc.
Hepp – Computer	B32	CDs/graphics software/Shareware/PD
ICP GmbH & Co. KG/Amiga plus	D44/E45	Publishing company
Informate Hard & Software	F44/G45	Hardware/software
IrseeSoft	E46	Amiga software
Jann Eicker Computersysteme	D49	Communication hardware/modems/hardware
Kai Uffenkamp Computer Systeme	B42/D43	ACORN risc PCs
Kölner Express	SF	Publishing company
Lube EDV	G37	Hard disk drives/controllers/hardware/software
M.Höttel EPS Software	F56/G57	Computer cables/games
Mega-Soft	F63	Erotic software
MicroniK Computer-Service	E42	Amiga hardware
Monkey Soft	B1	Erotic software
Möller Computertechnik	B56	Computer cables/special paper/colour ink cartridges
Neue Medien Ulm	G26	Publishing company/specialist journals
Novitas GmbH	C16/D17	PC games/tools/utilities/music software
O&K Design GbR	F62	PC hardware/monitors
O&K Design OHG	B52	PC hardware/monitors
Pagedown Computer	F42	PC games/consoles/games
Power Inside Datentechnik	B34	PC software
Rainer Sieg Prism Leisure GmbH	C13	Games/tools and utilities/software
RBM Computertechnik	G60	Amiga hardware/software/scanners
Richters DTP Center	C57	Colour ink cartridges/ribbon cartridges/CD-ROMs
Schatztruhe GmbH	D43	Video imaging software/Amiga graphics software
Seidel Softwareservice	C26/D27	Graphics/video imaging/Amiga software
SK Computer	F26/G27	Software/games
SK Computer	B58	Software/games
Sofortservice J. Kantimm	C2	Consoles/games/peripherals
Softsale Lau und Zielke GmbH	E16	Games/consoles/publishing company
Software 2000	D4/E5	PC games/games
Sonic Computer	G52	Hard disk drives/controllers/hardware/disk drives
SVD Datensysteme Vertriebsges	B61	Peripherals
Terracom	G49	Computer magazines/PC games/PC tools and utilities
The Real Ologram	E48	Amiga software/games
Titan Computer	B62	Video imaging/graphics software/games/hardware
Tripel S	B26	Hardware/games/consoles/CDs/peripherals
Top Office Products	B48/C49	CD-ROMs/CD cases/peripherals
Urban Mobilfunk	E56/F57	Peripherals
Verkosoft	C46	Games/joysticks/etc.
Verlag Recht + Wirtschaft	G26	Publishing company/specialist journals
Vesalia – Computer	E55	Amiga hardware/software/games
Village Tronic Marketing GmbH	E32/F33	Amiga hardware
Ypsilon Computerhandel & Co. KG	F35	PC hardware

Kato

Kato are hoping to unveil their brand new Zorro sound board. It's a small Zorro II PCB, offering four connectors which are the same as the clock-port connector inside the A1200.

You'll be able to plug and mount the Melody1200 or their new HighSpeed Serialboard, which offers 460,800 bps, onto these. You'll even be able to use Hypercom, via a patch.

It will be possible to mount more Melody boards, allowing you to obtain multichannel playback with the Melody1200 when you've got one set up as a master and the others set up as slaves.

There will be increased bandwidth for all boards plugged onto it and a special bridge chip will offer twice the bus throughput of actual soundboards (up to 3.55Mb/s).

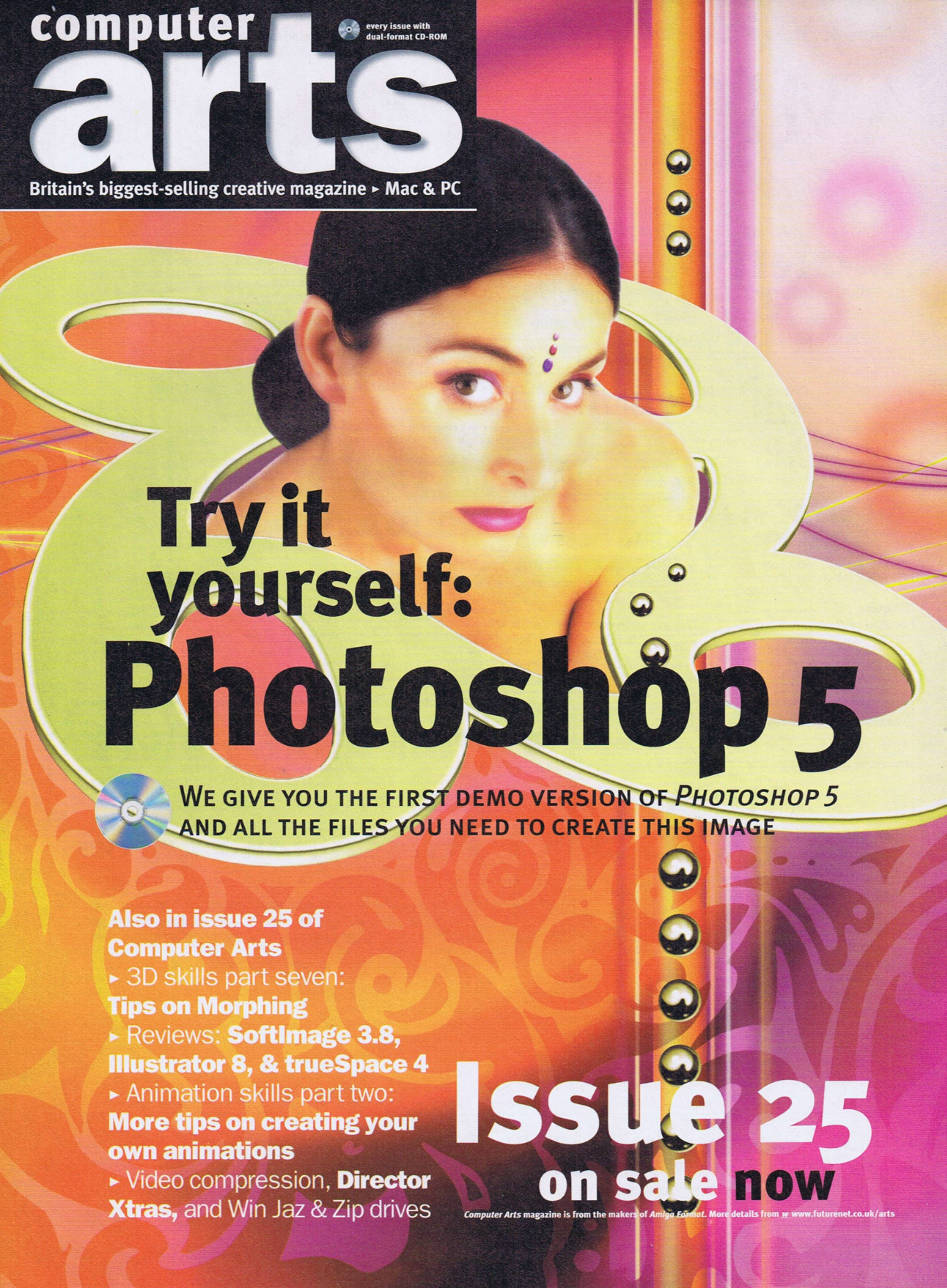
Hopefully it'll be the first sound board giving more bus performance and therefore lower load to the machine. The *OctaMED Soundstudio 2.0* package will also be on display.

BEN'S STUFF

As you can see from the exhibitor list to the right of this box, Computer '98 looks like it'll be a great show. phase 5 are notable by their absence (they're attending a Mac show), but there'll be plenty of movement on the PPC front anyway from the likes of Haage & Partner (and we expect some shock news concerning PPC accelerators at the show).

More to the point, this year's show looks like it'll be one of the most exciting yet, with loads of new products being announced or presented for the first time. This includes the BoXeR, Inside Out, *Napalm* and more. We also expect Amiga Inc. to make an announcement concerning Workbench 3.5, the so-called 'November Box' OS5 Prod developer's machine and further details on the partners that Amiga Inc. are dealing with for the new Amiga.

Now, more than ever, you'd be foolish to miss the world's best Amiga show, and there's still time to get involved. You can book a flight for about £120, you can get accommodation in Cologne from only £15 per night and you can ring the organisers on 0049 234 946 880.


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Issue 25
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SCREENPLAY

The latest games, hints and some clever programming from you!

Hello! I haven't really done anything at all in the games section again, but I think Nick is trying to get his money's worth out of all the frankly embarrassing pictures he's had taken of me. This one is particularly unfair...

However, what is fair is the amount of game news and reviews we have for you again this month. We're building up to Christmas, which promises to be just as big in terms of games for the Amiga as it has been for some years.

Check out the contenders in Previews, but also take the time to check out our manga-tastic *Gunbee* review and, of course, those little bundles of joy that we all know as Reader Games.

Andy Smith



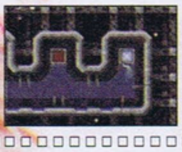
AMIGA FORMAT'S REVIEW POLICY

WHAT OUR REVIEW SCORES MEAN

Every month we scour the world's software houses for the latest and greatest Amiga games. We try to ensure we keep you as up to date as possible and we'll stop at nothing to bring you the best, definitive, no-nonsense reviews of the games that matter.

90+%	The crème de la crème. Only the very best, most playable and original games are awarded an AF Gold – the most highly prized rating there is.
80-89%	These games are very good, but due to minor flaws are not the finest examples of their genre.
70-79%	Good games which are worth buying, especially if you have a special interest in a game type.
60-69%	Average releases with somewhat limited gameplay and appeal. Games in this category tend to be flawed.
50-59%	Below average games which are unlikely to impress your mates or your wallet..
40-49%	Overwhelmingly poor quality games with major flaws and appalling gameplay.
Under 40%	The absolute pits.

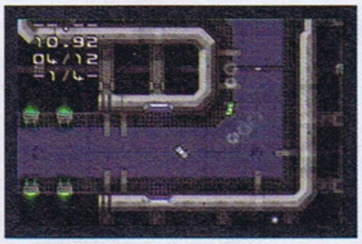
Previews






Nick Veitch gets to grips with driving, devils and death in his look at the exciting games you're going to be playing soon...

Max Rally



Racing through the cosmos can be tricky, especially if Carl Sagan gets in the way...

Max Rally	£19.99
Release Date	Soon!
Publisher	Fortress
Requires	2Mb

Car racing games have always been a favourite on the Amiga, especially top-down racers where you can take on your mates.

Max Rally hopes to build on the playability and graphic appeal of previous classics such as *Skidmarks* and *Micro Machines*™ and bring the whole genre up to date.

As well as being able to play against up to four human players, various other racing modes are available, including racing against computer cars, racing against the clock or participating in a Championship or Max Challenge.



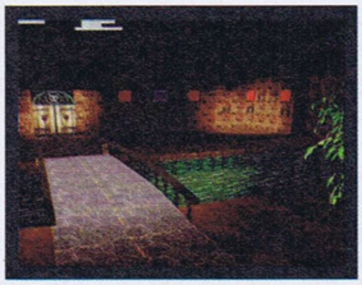

A variety of terrain types and multiplayer modes should make Max Rally worth investigating.

There are twenty different tracks and four different types of terrain (Woodland, Cosmic, Alpine and Dunes) to be negotiated. *Max Challenge* requires a further element of skill – to successfully complete a lap you must drive over all of the "switch pads" on the way round.

Link up games are also possible, so you can play two player split-screen, two player link up or four player split-screen link up. If you don't have two Amigas to stick together you can play in a battle mode where the slowest cars are eliminated as they fall off the screen.

It certainly looks like fun from these screenshots. Hopefully we'll have a copy in time to review it for our next issue. Check out the fortress website for up to the minute info: http://www.allcom.co.uk/~fortress/

Claws of the Devil



Claws of the Devil	£TBA
Release Date	TBA
Publisher	Titan Computer
Requires	Graphics card, '060 32Mb RAM

After a quick glance at the screenshots, it should quickly become apparent what genre of game this is, and doesn't it look great? The engine will demand a pretty high spec to run, which is only to be expected. You'll need a fast processor (preferably PPC, although an '060 will do), a hefty 32Mb of RAM and a graphics card (although an AGA version may be released later). At the moment the coders are working on implementing the power of the Permedia 2 3D routines to make the display even faster.

Whatever hardware you have though, the game will feature many lighting transparency and fog features to make it realistically creepy. There are no pictures of the "heroine" model yet, although she and all the enemies are going to be heavily animated to make them smooth. All the items in the game will be rendered as complex polygonal objects with up to 800 shaded polygons each.

The camera will be taking the now de rigeur free following position, allowing you to see the heroine and her surroundings as she fights her way through the promised 13 large levels.

We can't wait to see more of this game so look out for more details in a future issue!



The stills look great, but how it moves is more important.




That's a nice tree (above), but can you escape the Devil's claws (left)? They look sharp to me.

Phoenix



Would you buy a used spaceship from this man? If you're following the storyline of Phoenix, you might have to.





Future Tales haven't previously released any Amiga games, but their first effort looks like it's going to be something special. Combine the best strategy elements of *Elite* with the storytelling and action of *Wing Commander* and you'll have an idea about what these people are trying to create.

Like *Elite*, *Phoenix* puts you in charge of a spaceship and allows you to wander where you will. You'll have to use your skill at trading, your financial acumen and your trigger finger to progress in this game. However, that's not all there is to *Phoenix* because there is an extra level to the plot.

You're playing the part of a special agent, deep undercover. The story will unfold as you meet various characters on your travels.

As you can see from the images on this page, the game looks like it will be simply stunning. Many of the stills and action sequences will be raytraced and, of course, a solid 3D engine will take care of the combat sequences. The whole game will run in 256 colour so you'll need an AGA machine or a graphics card, but it certainly looks worthwhile.

There's no indication yet of how soon this title might be released but, as ever, we'll keep you up to date with any developments.

Phoenix	£TBA
Release Date	TBA
Publisher	TBA
Requires	50MHz '030, 4Mb, HD/C

Dark Millennia

Dark Millennia	£TBA
Release Date	December '98
Publisher	Crystal Software
Requires	AGA

We've looked at some of Crystal Software's upcoming games before in the Previews section, but we haven't really mentioned an awful lot about their real-time strategy adventure game, *The Dark Millennia*.

The game is organised into a series of chapters. The choices and decisions the player makes in the game affects the outcome of that chapter, and alters where he or she starts in the next on.

As a result, there should be an almost endless number of permutations and routes through the game. The player can even choose to play on the side of good, or, usually much more fun, on the side of evil.

The Dark Millennia involves the player creating armies and towns with a changing economy, constantly adjusting forces and sending them out to perform various quests.

It certainly sounds very interesting and we're looking forward to its release in November.



An RPG-strategy-god-game experience, coming your way in time for Christmas.

Napalm



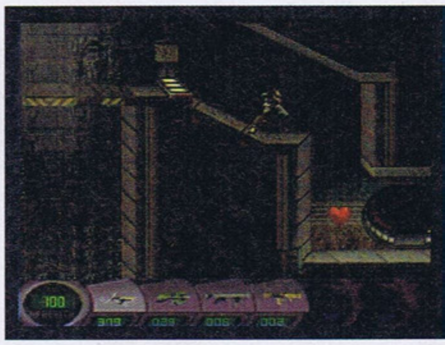
This is really just a quick note to give us an excuse to print some more terrific *Napalm* graphics, and to let you know that the game is very nearly finished and will probably be available by the time you read this. So stop playing the wonderful demo on our cover CD this month and go and buy it! AF



Kill, destroy, maim, blast, nuke, vape, vape, vape... Sorry, I get a bit carried away by the demo – just imagine what I'll be like next month when the full game is out!

Napalm	£29.99
Release Date	November 1st
Publisher	clickboom
Requires	'020, 16Mb RAM, CD

Abuse



When the going gets tough, the tough start Abusing, as Ben Vost discovers...



If you've only got the demo that was on AFCD30, you'll see this screen (above) far too soon.

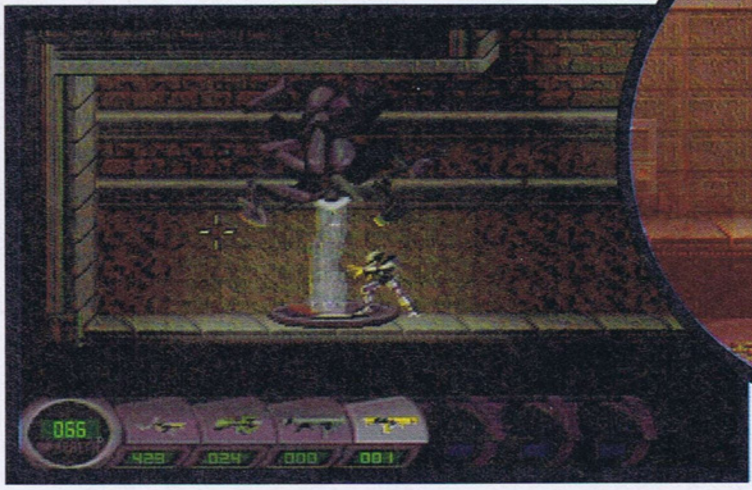
Although Abuse is a good game, it would have probably sunk without a trace. Electronic Arts brought it out for the PC just after *Doom* hit the streets in a big way and although it had user-customisable weapons and levels (and even comes with a level editor), nobody today would probably know about it, least of all on the Amiga.

However, at the start of this year, along with loads of other software companies, Crack Dot Com (sounds like a pirate organisation, I know) decided to put *Abuse* out to pasture and give away the source code.

Although *Doom* got all the press, then *Descent*, and then *Quake*, it would be a mistake to ignore this quirky little platformer which not only has plenty to offer in its own right as a game, but is also more suited to the leisurely pace at which most Amiga processors amble.

For those of us with a machine on which *Quake* can be played enjoyably, there are bells and whistles that can be turned on, like the lighting effects, but it will quite happily run on an '030, even though it slows down somewhat when the action really hots up. Installing it is a





Sometimes you aren't sure whether to keep your weapon pointed at the floor or covering the ceiling (above). Saving (below) gives you a nice thumbnail so you can see where you have got to.

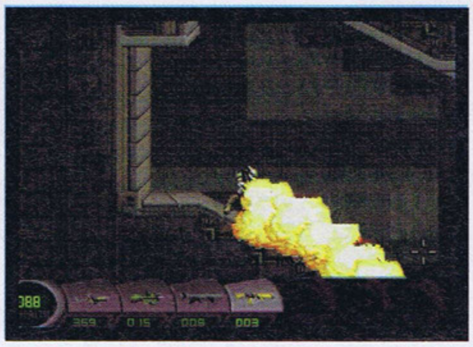


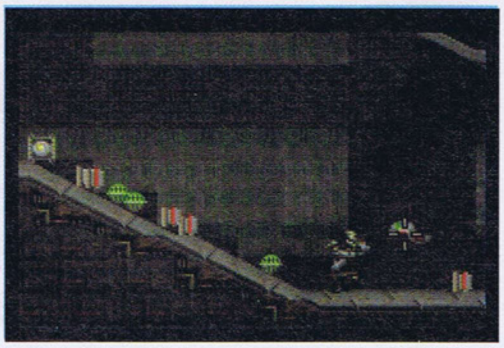
There are a variety of weapons available (above), but watch out, the aliens have them too!











Techie stuff

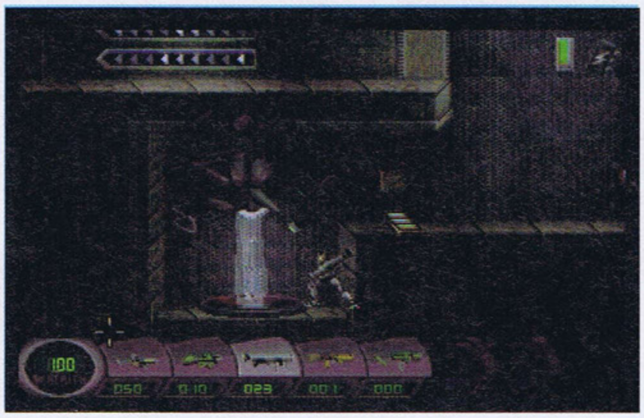
***Abuse* is based around *Lisp*, the same language that was used for Commodore's *Installer* program.**

It's not nice to use, but it can be pretty powerful if you spend some time on it. Even if you comment it heavily, it can be a pain to try to unravel someone else's script so you'll have your work cut out for you.

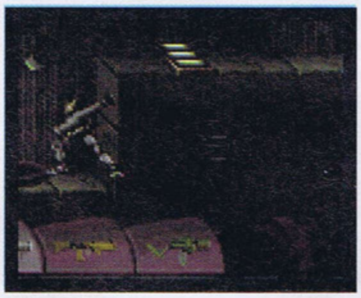
Having said that, we fully expect to see your extra *Abuse* levels and weapons on upcoming *AFCDs*, so get a move on and learn how to program!



(Above) Invisible aliens (no, really!) are much harder to deal with than the normal ones.







The different weapons have different ranges, power and effects, as you'd expect.

simple matter of copying all the files to your hard disk and then you're ready to rock.

We had no trouble with it whatsoever on any of the machines we tried it on, ranging from an '030 with 8Mb RAM to an '060-equipped A4000. The game takes advantage of the hardware you have available, using *AHI* and *RTGMaster* for sound and graphics cards respectively, although it does offer native AGA screenmodes too.

For those who can't determine what sort of game *Abuse* is from the screenshots, I'll tell you that it's like *Turrican* set in *Aliens*, but played with

> **"...there are a number of other baddies, like gun turrets, big robots and scenery-based nastiness"**

the keyboard and the mouse. Got it?

It's a platform-based shoot-em-up stealing liberally from James Cameron's meisterwork, but unlike *Turrican*, it allows you to shoot in any direction. You see, you control your little blokey (Nick Vrennaby by name, shooty monster by nature), using the keyboard to get his little legs to make him run left and right, jump and call lifts, switch switches, press buttons and the like. Meanwhile, your mouse hand controls the direction in which he aims, his shooting and speeding up.

You have a variety of weapons at your disposal, from the fairly standard pulse laser and grenade launcher to the more esoteric guided rocket launcher, flamethrower and others. Shooting the Alien lookalikes sometimes results in them dropping useful ammo packs.

You see, unlike the aliens in *Aliens*, these little blighters have guns like you do, but fortunately they're a lot easier to kill and don't appear to have acid for blood. In addition to the Aliens (sorry, aliens), there are a number of other baddies, like gun turrets, big robots and scenery-based nastiness (long drops, lava, one-way corridors and the like).

The gameplay doesn't alter much over the course of the game, but neither does the gameplay in *Doom*. The only other problem that I can see is that you're only allowed five saves to do the whole game, although you do get a nice thumbnail picture showing you where you've saved.

All in all, *Abuse* isn't a great game, but it is a very good one. It isn't first person perspective, it doesn't have polygon-based bad guys and it doesn't have an eerie CD soundtrack, but it's still a corker with the bad guys waiting for you around every corner.

What's more, it's still very cheap thanks to the fact that the main executable is Freeware, and you can even try it out on *AFCD30*.

DEVELOPED BY: Crack Dot Com
SUPPLIED BY: Alive MediaSoft
PRICE: £14.99
RELEASE DATE: Out now
REQUIRES: AHI, CD-ROM drive

Pros and Cons

- + Great sound effects.
- + Neat control method.
- − Lisp isn't the easiest of languages.
- − Gets repetitive.

OVERALL VERDICT:
Abuse really is great fun to play but it's a bit repetitive.

80%

GunBee



Aaiieee! Screamy voices must mean that it's time for a manga-inspired shoot-em-up! Ben Vost sighs.

ON THIS MONTH'S CD AFCD33:-CoverDisks-/117b/

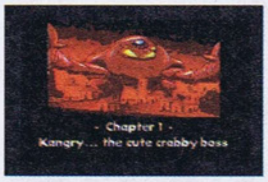


The usual big-eyed heroine leads the charge towards the enemy...

Back in the days when manga had never been heard of outside the land of the rising sun, and when cartoons were for kids, not spotty adolescents or grown-ups who hadn't quite, this game would have been a revelation – "Look at their big eyes and hear their squeaky voices!"

Now we tend to take manga, or more properly, anime, in our stride. Not that we're immune to cute characterisation, but it's just not as innovative these days. However, the fact that *GunBee F99* is thoroughly steeped in anime doesn't mean that it's not a fun ride.

> ... to power up your ship you can't just shoot all the **enemies in a single wave** – you've got to shoot clouds...





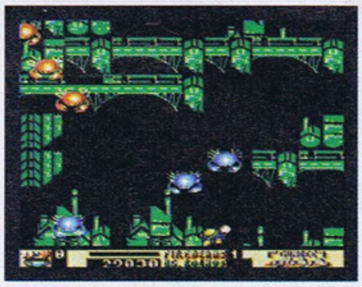
Chapter 1, then chapter 2, with four more to go.



As a game it's a bog-standard, vertically scrolling shoot-em-up, with the usual array of power-ups and end-of-level bosses, but cute, y'know.

It's not that brilliant though. The *Xevious*-style bombing aspect of it seems superfluous since you can avoid the slow-moving bullets that the ground-based forces chuck at you, and those without an auto-fire joystick will curse at the number of times they unleash a Firebeam instead of just a bullet. However, it is fun in that kind of addictive, "one more go" way.

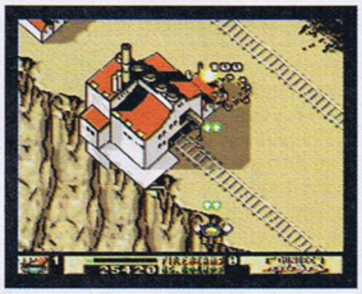
Its "tweak" is that to power up your ship you can't just shoot all the enemies in a single wave – you've got to shoot clouds which will produce bells. You can catch the bells as they are and they'll give you 500 points,



Matron, can you do something about these crabs?

but to get power-ups you have to shoot them several times, bouncing them up the screen, at which point they'll turn a different colour and you can then catch them for the power-up.

There's a complex idea in story mode where if you can bounce bells into waiting baskets you get extra

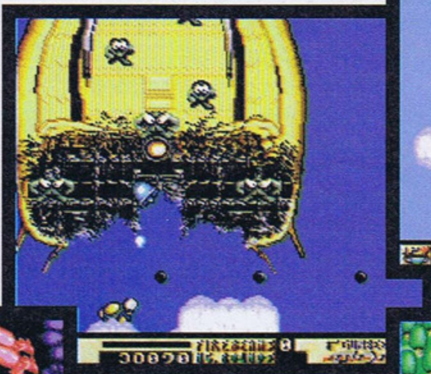


A factory, making nothing but misery for our valiant GunBee pilot.

lives, but this is pretty tricky and only works in story mode, which is much harder. And that's pretty much it.

There's the usual end of level bosses which flash in the places you can hit them, and you even get a "shoot here!" sign if you haven't managed to hit them after a while.

It also gets very tricky in that you tend to get more black bells (bad ones) if you're using an auto-fire joystick, but other than that it's not much different to any other shoot-em-up. It's nicer (and cheaper) than *Ultra Violent Worlds* and it'll certainly while away a rainy afternoon. However, be warned that it's not very stable on an '060.



As in most shoot-em-ups, the end of level bosses are your usual "shoot-the-flashy-bits" affairs.





Firebeams can be devastating, but they're also limited. That's the last one gone.





It's easy to fire Firebeams by mistake if your joystick doesn't have an autofire switch.

Supplied by: Epic Marketing (0500) 161 486
http://www.epicmarketing.ltd.net
Price: £7.99
Versions: Floppy only
Requirements: AGA, 4Mb fast (can be installed to hard drive)

Pros and Cons

- \+ Addictive.
- – Getting killed behind the clouds.
- \+ Attractive but simple graphics.
- – Bombing seems to be a waste of time.

OVERALL VERDICT:
Cheap and very cheerful, this is a great value game, but it's not the most innovative.

80%

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They're something and they're spooky, they're dum de dum and kooky – they're the Reader Games. Or Nick Veitch...

Reader Games

AFCD33:-ReaderStuff-/-ReaderGames-

ON THIS MONTH'S CD

Having enjoyed myself so much last month, I felt compelled to return for another Reader Games spot. I was really impressed by the quality of some of your submissions last month, and I have been again this month. Some of these games are more fun than titles people pay a lot of money for. Any of them are better than some of the commercial games we've had through these doors (no names, you know the guilty ones).

And I hope you accept all the sadistic sarcasm and vicious vitriol in the spirit it was intended – to help you create better games.

£50 AF Winner!

WIZARDS OF ODD

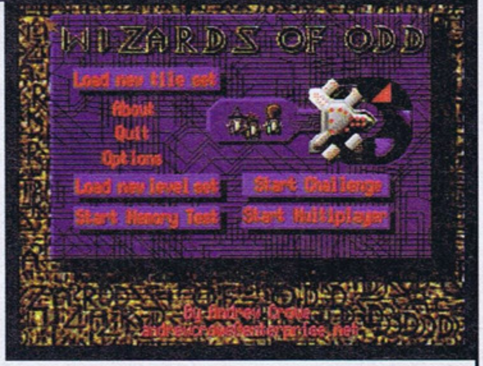
This rather aptly named game is based on an old A500 game called *The Teller*, which I don't actually remember, but I'll take Andrew's word for it.

It's a sort of action puzzle game. Each of up to three competitors play the part of a wizard. At the beginning of a round, a pattern is displayed above each wizard's house, and from that moment they participate in a fairly ridiculous competition to collect all the blocks required to build the pattern.

Bouncing on each other's heads and some vicious pushing are the means of combat, as each wizard runs, jumps and bounces in order to try to catch one of the gently drifting blocks on their head. Then they race back to their respective homes and try to place the block in the right position.

As well as being a game of speed, luck and co-ordination, this is also a test of memory. You have to remember the pattern, which could theoretically be made up of sixteen completely different blocks. You can define your own patterns too, if you want to make things especially easy (or tricky) for you and your pals.

Although it may lack depth, it is quite compulsive and is certainly quite slickly presented. One note of warning though Andrew, I think people might get a bit tired of spending five minutes waiting for all the credits to finish every time they run the game...



Odd by name and odd by nature, this game may be related to the old A500 game 'The Teller', but we don't care since we've never heard of it.

READER WARRANT

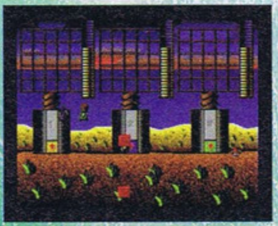
When you're sending in your submissions make sure you also give us:
1. An address where you can be contacted.
2. Details of the language used to create the game.
3. A recent photo of yourself.

The address to send your stuff into is:
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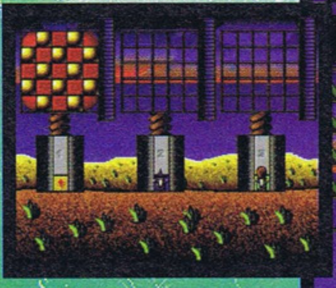
Everything included on the *AFCD* must have a reader warrant with it. Just cut it out off this page, sign it and send it in to us with your game and a recent photograph of yourself. A last reminder: if you don't include this warrant we simply won't be able to put your game on the CD – that means you won't be able to have it judged by other readers.

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It's all a bit strange, really...



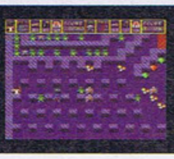
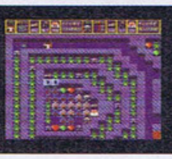
Player 3 is awarded the housepoint for getting all his blocks in the correct place.





AUTHOR: Andrew Crane
LANGUAGE: Amos
VERDICT: Excellent multiplayer fun, which can be a bit dull on your own (although it isn't finished yet). It's still well worth this month's prize.

DUNGEONS



"Ready or not, here we come!" shouted the bad guys in their funny little costumes, yesterday.

Dungeons continues last month's theme of taking elements from successful games and fusing them together into a whole new experience. Essentially, think the old classic *Zombies* meets *Gauntlet*. I suppose you could say that *Gauntlet* was a *Zombies* derivative in the first place, so I might have to concede the point there, but in that case I suppose *Dungeons* is the missing link.

Rather like *Gauntlet*, the object is to run around various, er, dungeons, and steal treasure, avoiding the nasty beasts. The beasts are spontaneously generated from the piles of skulls, which it would obviously be advantageous to destroy because otherwise the dungeons become filled up with monsters pretty quickly.

At first it seems completely impossible (and I still haven't made it to level three), but this is one of those games where you have to learn decent tactics. There's no point in just setting off, grabbing as much as you can and blasting everything in your way as you'll soon find yourself outnumbered by evil ghouls, goblins and those strange-looking blue things with the poor dental hygiene.

Cunningly, Richard has designed the levels so that there are advantages to doing certain things first, before some of the larger areas become absolutely swamped.

Gems, coins, first aid boxes, locked doors, keys and the like block the monsters, so they can't get in or out of some areas until you pick something up.

Although the action is somewhat jerky on occasion (and with upwards of 50 monsters on screen at once, this isn't really surprising), it doesn't seem too bad when you're actually playing the game.

However, sometimes the monsters do have a nasty habit of rushing forward at 10 times their normal speed, which I'm not sure is actually intentional.



AUTHOR: Richard Phipps
LANGUAGE: Amos Pro
VERDICT: Addictive, with a clever dungeon layout. The speed could be worth looking at though. This very nearly won this month's prize, just for sheer addictiveness.

SIR LOSEALOT





This game came at just the right time to help Nick with his joystick skills, fnarr, fnarr. Ahem.

Well, what can I say here? It's a platform game. You have to avoid the various spooks in the castle, or eliminate them by the time honoured method of jumping on their heads, and collect all the treasure lying about. Oh, and be careful of the spiked bear-traps that the workmen seem to have installed all over the place.

It is fairly competent, although some of the animated characters need a bit of work – I don't think I could ever be scared of that skeleton...



Scary? That skeleton? Don't make me laugh...

It's all rather too reminiscent of *Atic Atac* for my liking, and indeed, this game has even less depth. I suppose there are some people who enjoy this sort of mindless platform game, but this one doesn't have much to recommend it. Like all games written with some game creator software, the trouble is that all the games you create end up being the same, and this is one which we've all seen hundreds of times before.

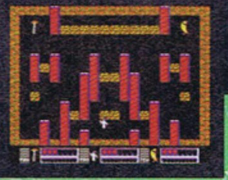
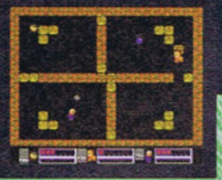
Although there are some nice touches to it, like the hidden blocks and the scenery which you can walk behind, there isn't actually anything new here. Perhaps more tellingly, even the same tired, old stuff has been done better before.

In your defence, Bob, you do mention that it was written for your three-year old daughter to teach her how to use a joystick, and I'm sure she is now able to run and jump with the best of them. It isn't too exciting though, is it?

We expected more from you after *King of the Castle* (the Reader Game winner in *AF114*).

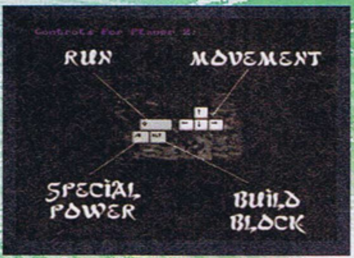
AUTHOR: Bob Hindle
LANGUAGE: Aspire2's Game Engine
VERDICT: Very suitable for teaching people how to use a joystick, otherwise it really is best avoided.

MORTAL KOMBASH


Pengo meets, er, something else, with nary a whiff of Sub-Zero and the rest of his mates.

The system requirements for this one might be a bit high for some of you. You'll need an AGA machine, 2Mb of RAM, two CD32 control pads (it uses the extra buttons) and two friends to play with.



It isn't, as you might expect, a beat-em-up, but more of a cross between *Pengo* and, er, something else.

Select your warrior from a cast including several old people, the sun, a Ninja and some other strange creatures. Then we're away to the arena where you will do battle against each other in a randomly selected maze.

Parts or the maze can be pushed around to bump into your opponents, which is rather similar to *Pengo* if you ask me. If you get hit three times, you're out for the count.

If you run out of blocks to push you can always create some, although this may take a few vital seconds, giving someone else the opportunity to finish you off. You can also just run and bash into people to hurt them too, which is less elegant but just as effective.

Each of the characters has a usually comical power, from a teleporting ability or a paralysis ray to almost total invisibility. The special powers have to build up in effect.

At the end of the day, the game is very simple and it's only charm is in being able to beat up your mates. Rather like *Worms*, it's the fighting against real people that makes it good. Come on Jonathan, even a rudimentary CPU player would be better than none.



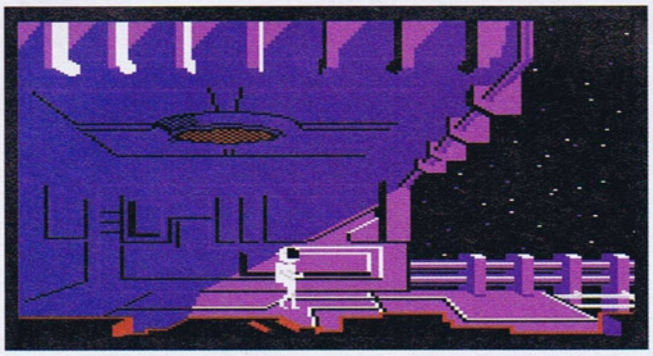
AUTHOR: Jonathan Sutton
LANGUAGE: Blitz Basic 2.1
VERDICT: An extremely simple and fun game when it's being played against other people, but then, so are almost all multiplayer games.

GameBusters

Space Quest II

It's over 10 years old now, so if you still haven't managed to finish it, Paul Bowen has the solution for you…

The first thing you need to do is look at your watch. Press C to see the message and then you'd better hurry. Walk to the red, circular



> "Yell at the hunter twice and when he comes near, throw the spore. **This will knock him out** so get the key and open the cell…"

pad and you'll be whisked away to the airlock chamber. Get the suit, open the locker, get everything inside it and you're now ready to go where no man has mopped the floor…

▼ Go through the door and get a severe warning from the boss. Talk to the other men on the computers if you want to, go onto the platform and get inside the little tube-shuttle. Enter the big ship where you'll get beaten up and taken to Volhaul.

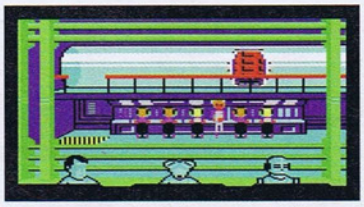
▼ The ship will crash land on the way to the mine, giving you the chance to search the two unlucky guards and get the keycard.

▼ Push the button inside the ship, walk up and then right and free the poor little critter in the trap. He'll remember you later.

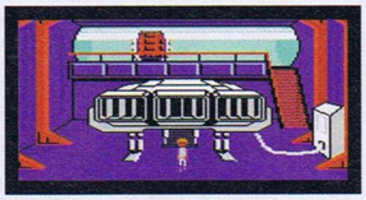
▼ Go left and up to the top level of the screen. Walk to the postbox and mail the application form. Get the whistle, fall off the edge and pick up the spore. Now go up to the big jellyfish and save your game here.

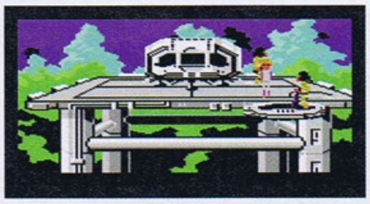
▼ Put the game on slow mode and navigate your way through the maze of tentacles. Get the berries, go back through the maze and go down, right and then diagonally up and right to the swamp. Rub the berries on your body and then walk right. Keep going until you get to a deep bit, then hold your breath. Swim down, right and up to get the crystal.

▼ Now hold your breath again and swim back out the way you came. Walk right, climb the tree and then walk right until you get captured.



The food was crap but ahhh… the ambience…





Three men in a boat. Yesterday.

Evening meal

Yell at the hunter twice and when he comes near, throw the spore. This will knock him out so get the key and open the cell door.

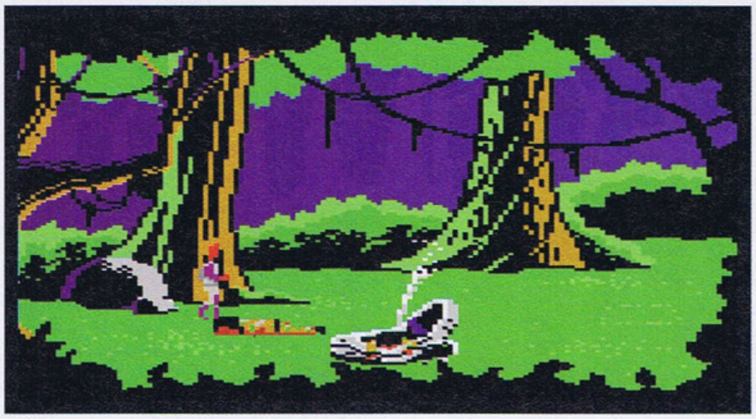
▼ Take the rope and go up, left and left again. Crawl onto the log and tie the rope to it. Climb down a bit and then save your game again.

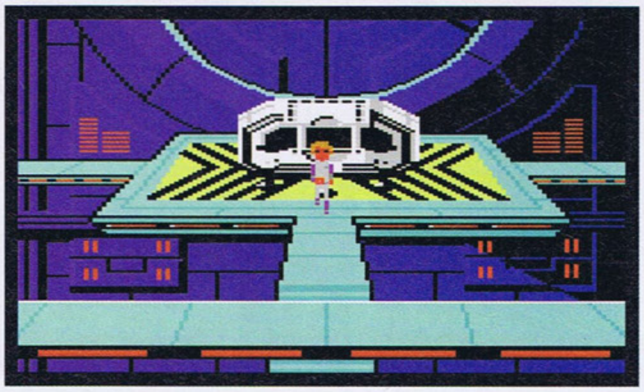
▼ Climb down the rope, almost to the bottom, then swing on it. The

The graphics aren't important, it's the gameplay that counts.









You must be joking! That thing'll never fly!

monster will try to grab you but will narrowly miss, so jump off at the other side. You should make it easily.

▼ Enter the cave and use the crystal. Go down the slide and pick the crystal up again. Go down and say the word to the little critter, the one you saved earlier. Climb down the ladder and then put the crystal in your mouth.

▼ Navigate through the maze until you come to the lake, then swim through and go in the right entrance (the left one is a waterfall).

▼ When you reach the bottom, go right, blow the whistle, go left, go right again, go through the hole and save your game again.

▼ The next part is tricky. Hide behind the fence and when the man goes behind a pillar so he can't see you, move up to the next one. When he goes behind it again, move under the tower, yell and use the lift.





Ticket to freedom

Get in the shuttle craft. I'll give you the pleasure of working out the controls for yourself. Fly up and out, then fly forward through space.

▼ When you get to Volhaul's asteroid you'll need to take the lifts to the various levels to get the five items you need. They're all found in the storage closets, apart from the toilet paper, which is found in the toilet.

▼ You need the plunger, lighter, waste basket, glass cutter and toilet paper. Avoid the floor polisher and female alien at all costs, no matter how desperate you are for a snog.

▼ Go back to where you came in and then go forward. Let the barriers come up and the floor roll back. At the last minute, stick the plunger to the barrier and hold on.

▼ Let go when the floor goes back and put the paper in the basket. Put the basket on the floor and light it. Go right to the command room where Volhaul shrinks you.

Little problems

Use the glass cutter on the jar, climb through the vents at the side and push the button. Climb out again, walk left and pull the switch. Type in Enlarge, go back to the jar and you'll return to your original size.

▼ Search the body and find the password SHSR. Look at the screen and type in the password. Go up the stairs, open the box and wear the mask. Now go through the pipes and out to the main corridor. Go left, left and left again.

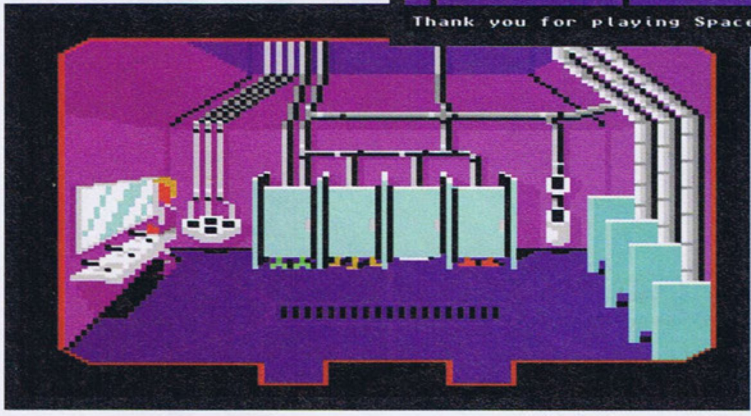
▼ Push the button and walk quickly right as the robot is after you. Get out into the big room, left of where you started, then go left until you come back to the robot's screen.

▼ Quickly get into the escape pod and type 'Look at ship'. You'll see the sleep chamber and, as you only have a few minutes of oxygen left, type 'Use sleep chamber'. You then get in and drift off to an eternal sleep (until *The Pirates of Pestulon*, anyway!).

▼ Well done, you've completed the game. Of course, this is the long way of doing it. To complete it straight away, just type CHEAT while you're playing... AF

> **"Let the barriers come up and the floor roll back. At the last minute, stick the plunger to the barrier and hold on."**





They have much squarer toilets in the future...

"Leave that to me," said Obi Wan. Sorry, wrong film.



STUNT CAR RACER

Hi *AF*,

I've just found a brilliant game at a car boot sale called *Stunt Car Racer*. It's even more fun when my brother and I link our machines together with a null-modem cable. Anyway, have you got any hints or cheats for it?

Clive and Colin Ford
Dunstable

It is a cracking game, even now, although it's not very keen on more modern machines and you may have to use Degrader, TUDE or something similar to get it to run. Anyway, here's a quick guide to the tracks:

The Stepping Stones:
Easy enough without our help.

The High Jump:
You need top speed to get past the pillar in the middle of the jump. If you aren't going fast enough you can skim over it, but your car will take some damage each time you do.

The Roller Coaster:
It's not always beneficial to just put your foot down and this track is a case in point. You shouldn't be doing more than about 150, otherwise you'll miss that first corner.

However, you can use the up and down section that this track is named after to get your speed up to top whack.

The Little Ramp:
Make sure you hit the jump at around 150.

The Draw Bridge:
Wait until the bridge is lowering before you attempt the jump.

The Ski Jump:
This course is like the Roller Coaster at the start so don't go too mad. After that you can drive like a joyrider...

The Big Ramp:
Go reasonably fast for the two smaller jumps; about 170-180 should do it, but the big ramp itself needs about 210.

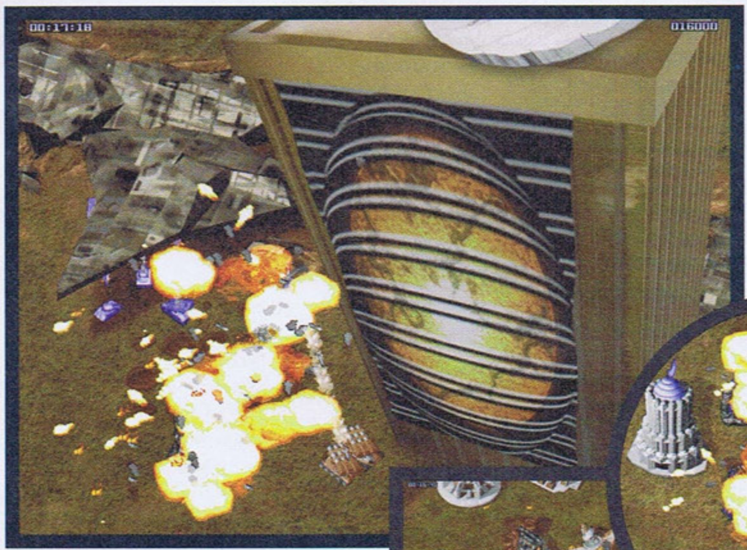
The Hump Back:
The trick with this one is not to go too fast. If you find yourself falling back then use a boost, but only at bits where it's flatter (like the start point).

In general:
Don't try bumping people off on corners as you're quite likely to fall off yourself. You should try to just nudge them as you go past on the straighter parts of the course.

Helping Hands

Napalm









Your mission, should you choose to accept it, is very, very hard. Best of luck!

Dear *Amiga Format*,

I've tried and tried and tried with the demo of *Napalm* that was on your CD, but this UFO always comes over my base and blows up the nuclear power plants and I can't do anything else. Are you supposed to be able to beat the baddies at all?

Frustrated of London

Hi Frustrated. The answer is that it's always going to be difficult to win the demo, although you can make it a lot easier on yourself by pre-registering the game (which will possibly be out by the time you read this) and getting the keyfile from clickBOOM. This will give you an extra ten minutes and more cash to spend. However, this might not be so easy to do if you don't have email.

Anyway, regardless of these features, the idea of the demo is that you have to destroy the enemy's base which is in the upper left-hand corner of the map, if you didn't already know. The problem is that he attacks you from two directions – straight from the base and also from the tunnel down in the bottom-right of the map. Ignore the tunnel and send your nitro truck into his base.

You're going to have to protect it very carefully because if it blows up before you get to his base you've got no hope.

Build yourself a light factory and then a medium factory and start churning out tanks (use the g key to make them all appear on the edge of your base). Once you have a fair number, send them and the nitro truck up towards his base. You need to put the truck alongside his main building and get it to blow.

This doesn't always work as there seems to be a random element in the nitro truck's blast radius. If you fail, you'll just have to start again.

Worms

Dear *AF*,

I have a nice little tip for the original *Worms* game from Team 17 which will give you access to all the special weapons. To use this cheat, simply type "total wormage" on the title screen.

M. Horner, Barrow-in-Furness

Thanks for that one, but I think that most people who've played Worms for a while will already know it!







News that isn't, from a reader. Anyone not know the cheat for Worms yet?

Special



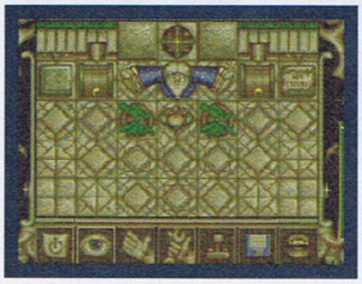
Valhalla 2



Dear *Amiga Format*,

I'm completely stuck on *Valhalla 2*. I have the planets Earth, Mercury and Saturn, a jug of cider, an amplifier and a Book of Icarus. I've given Grumbleweed the cider but he just drinks it and belches. I've completed the other three levels, but can you please help with this one?

L. Conway, Middlesborough



"It was this big," said the wizard in appreciation of the old, old fishing tale.

Okay, don't worry about Grumbleweed burping – you should find out that it's what he likes to do best. Basically, you're going to need to burp louder than him to progress further, and you have the thing in your possession that will allow you to do that – the amplifier.

Get yourself some ale from Herman's room, then give the cider to Grumbleweed, which he'll drink. Now you should put the amplifier on the square beside him, stand on it, drink your ale and then beeeellllch! You should win the competition hands down...

Indiana Jones and the Fate of Atlantis

Dear Helping Hands,

Please can you help my daughter and myself progress with *Indiana Jones and the Search for Atlantis*? Indy and Sophia are stuck in the caves where Professor Sternhart's skeleton has been found.

We appear to need a Worldstone (which we cannot find) to place on a spindle, along with a Sunstone and a Moonstone (which we have).

We have taken Indy and Sophia to a large cave with three doors and that is as far as we can go. I will be eternally grateful if you can help.

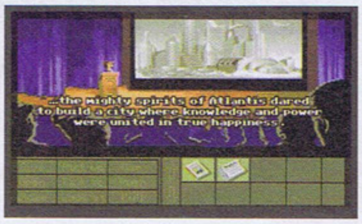
Debbie and Rebecca Robertson, Swinton



Just a friendly word of warning – Sophia definitely doesn't like being pushed around.

Wow! Eternal gratitude, eh? I could do with some of that. Your depiction of where you are in the game seems a bit confused. You say that you've got to Sternhart, but that's where the Worldstone is, along with a staff. To get further, you'll need to examine the waterfall that should be in the same room and use the chain hidden behind it. Then you'll need to find the room with the shelf and put the three stone heads you should have on it to open the other door leading out of the room.

You'll need to use the staff with the chock you should also have to free the counterweight. Then use the staff again on the statue's mouth to start the elevator working. After that, you're on your own again...





THE IMMORTAL

I'm stuffed right at the start of *The Immortal*, level four. You see, there's this troll there and it keeps killing me. What do I do?

R. Howard, Mendlesham

You need to avoid the troll's swings until a man throws a dagger into it. Then talk to the man to get a magic carpet. Leave the room via the northern door and use the magic carpet to fly along while avoiding the flame spouts (you'll need to watch the dot of shadow under your rug to judge your distance).

BENEATH A STEEL SKY

Dear AF,

Some time back, I'm sure you printed a set of codes which allowed you to start on any level in the brilliant *Beneath a Steel Sky*. I've lost my saves and don't want to have to play the whole game again to get to the place I was at. Can you print them again then?

HR Agave, Portugal

I presume you're talking about the CD32 version since I wasn't aware that there were codes for the normal disk version. Anyway, here they are:

000000	*The Beginning*
936842	*The Furnace*
623845	*The Factory*
543961	*1 Level Down*
810354	*With Potts*
692730	*Security Building*
180283	*With Mrs Piermont*
986254	*With Eduardo*
280870	*Subway*
178931	*Linc Hideout*
574439	*The End*

SEND US YOUR TIPS!



If you've got some hints, cheats, tips or general good advice on any Amiga games – especially some of the newer ones like Genetic Species, Foundation or whatever, then don't keep them to yourself – send them in so we can pass 'em on to other gamers out there who might be having more problems than you.

Also, if you've got a query about a game (and no, I don't really mind people asking about The Secret of Monkey Island), then drop us a line and we might be able to answer it in Helping Hands.

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Space Station 3000

Work In Progress

A new space-based, combat/trading, adventure-type game? Digital Images' Stuart Walker is your host in space.

At Digital Images, we wanted our first game to be something new, not another *Doom* clone or anything like that, and so we thought of a strategy game that would also include action and space combat.

Designing a game isn't as easy as it may sound at first. We had to plan how all the screens would work and all the possible outcomes of different events. We wanted to combine the trading idea from *Elite* with some ideas from *UFO*, *Sim City* and *Theme Park*, as well as including some of our own innovations. We also wanted to add a bit of space flight combat, just to get the excitement going a bit.

> "These missions will consist of destroying pirate fleets, ending wars, exploring planets, assassinating people and so on."


Doughnuts in spaaaaace!

First of all, we wanted to generate some interest amongst Amiga users, so we got some early screenshots, as well as lots of information, and sent it off to the Amiga Flame and Amiga Nutta websites. As expected, this generated a lot of interest and even got some publishers contacting us.

As we got the support of the Amiga community, a couple of people were brought onto the project to help with development in various areas.

First of all, we put a basic game together that linked all the various possibilities. This took several months, but when this was done we added the space combat side of the game.

This took a while but it now looks good, is fun to play and also gets the tension and excitement levels up.


Ship boarding actions are new to us...

We've also added an extra element of control to the soldiers so that you can board the enemy ships once you've disabled them.

When the AI was in the early stages, the enemy soldiers didn't do anything until your soldiers came near them, at which point they would check for a line of fire. If they could find one then they would fire.

The AI will be finished by the time you read this, but it is still being polished up at the time of writing. Various communication options have been added to enable you to talk to other people over the radio.

We've recently added the concept of missions. As time goes on, you'll be given missions from the Federal HQ. These missions will consist of destroying pirate fleets, ending wars, exploring planets, assassinating people and so on.

One of the main missions is to destroy a massive pirate organisation. If you don't complete this mission then piracy will get worse every day.

Around a month ago, when all the main pieces of the game had fallen into place, we completely overhauled the game's graphics. A CDDA sound system was also added so that Space Station 3000 will play music directly from the CD. Because we're using CDDA, we know that the sound will be of the highest quality and it won't have that 8-bit feel to it.

We're also adding foreign language options to the game. One major problem is that most of the new games are only released in English, so anyone who can't speak English can't play a game that they would really like to. We hope that the foreign Amiga users will approve of this move.

Playtesting has been carried out in all of the game's areas to make sure that it's as enjoyable as it can possibly be. We're very happy of the way *Space Station 3000* has developed and all that's really left is to finish off the AI, playtest it a bit more and, finally, get it released.




Oops! It's not a doughnut – it's actually Space Station 3000.

Contacts

***Space Station 3000* should be released in time for Christmas. For all the latest news regarding the game, check out the Digital Images website at:**

http://www.digital-images.demon.co.uk

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PD Select

PDmeister Dave Cusick sifts through this month's sackful of PD and Shareware offerings.

ACI Sept/Oct 98 Mag

BY: Various
WARE: Restricted freeware (permission required to redistribute)
PD LIBRARY: Roberta Smith DTP
NUMBER OF DISKS: 2
PRICE: 90p each to ACI non-members, plus 50p P&P



That infernal millennium bug problem cleared up.

Roberta Smith DTP have been the official distributor for Amiga Club International's disk magazines and club disks for some while now. Club membership costs a tenner, which buys a regularly posted members list, a club magazine and club software disk every other month, as well as a discount on PD disks from the Roberta Smith DTP library (members pay 50p plus P&P rather than the usual 90p). If you're interested in joining or in finding out more, give Roberta a ring on the usual number.

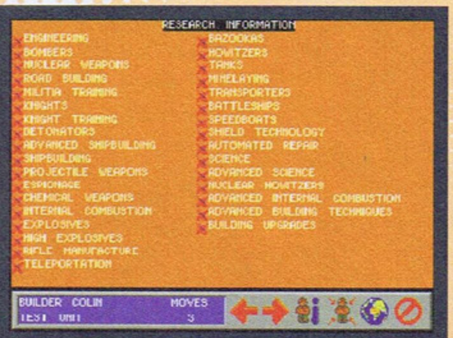
ACI's magazine disk for September and October 1998 contains a typically eclectic mix of articles. Browsing through an issue of the ACI mag is rather like rummaging through some

BATTLESCAPE

Battlescape, as the name suggests, is a tactical war game which owes something of a debt to strategy classics like *Megalomania*. The action takes place in a randomly generated world and pits two teams against one another in an ongoing arms race.

Each team begins with a single builder, but must build an entire civilisation. Builders can construct factories and research laboratories in which technological breakthroughs can be made. From humble beginnings, each team must endeavour to fashion powerful weapons, such as bazookas, howitzers and even battleships, with which to dispense death and destruction. *Battlescape* features complete agricultural and economic systems, but the emphasis is clearly on the tactical warfare element of the game.

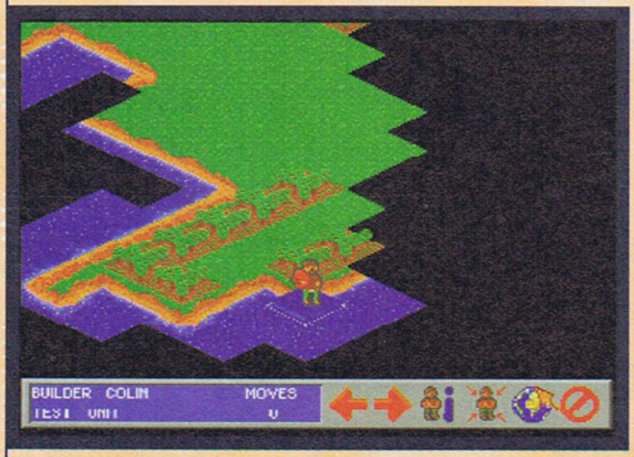
It employs a turn-based system, with mobile units being able to move a certain number of times and perform limited actions during a single turn. If units attempt to move into positions on the landscape which are already occupied by enemy units, combat sequences occur. Because these sequences are resolved using a formula which takes into account the number of moves each unit has left in a turn, the best strategy is to attack at the start of a turn, rather than marching a unit a long way and then attempting to strike at the enemy as an afterthought.



Quite an impressive arsenal to play around with for a knight in shining armour.

Some units aren't mobile, and these include things like production bases, farms and shipyards. These units can be used to manufacture various mobile units and weapons of war, or to produce vital supplies for your empire. As the old saying goes, armies march on their stomachs, so it's really important to make sure your farms and fisheries can feed your forces.

Battlescape is an absorbing strategic simulation which will certainly appeal to fans of the genre. With a control system which is easily grasped and deep enough to keep even the most proficient warmonger happy for some time, this is definitely recommended.



Go forth and create a warmongering civilisation – that's the aim of this turn-based strategy game.



My builder (blue), about to come off much the worse for wear in a scrap with the enemy.

BY: Chris Usher
WARE: Licence
PD LIBRARY: F1 Software
NUMBER OF DISKS: 2
PRICE: £4.99

Selection of the month

MEGABOOK v4.1

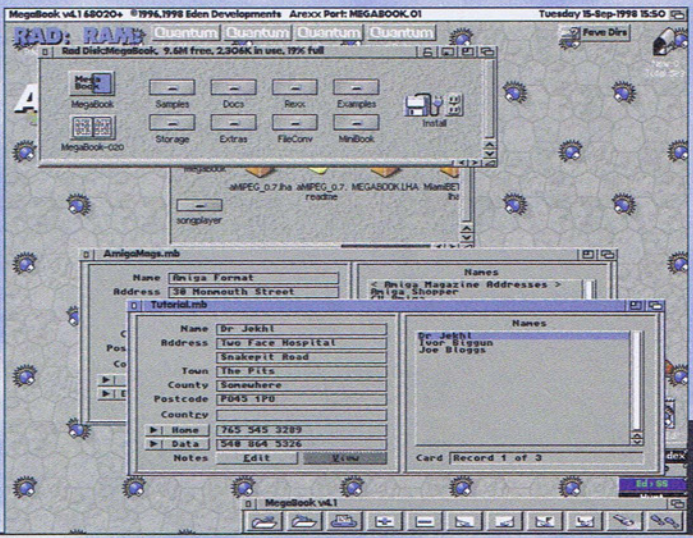
This new address book program has been developing at a very rapid rate. It was designed to be fast and powerful, and as successive updates have appeared over the last few weeks, it has become increasingly evident that this design objective has been well and truly fulfilled.

MegaBook does everything that the million and one other Amiga address book managers can do, and a great deal more besides. You can load and edit multiple databases using the simple interface and floating icon toolbar, but what really sets *MegaBook* apart is its use of ARexx to provide some really useful extras.

MegaBook can use your modem to dial your friends and acquaintances up for you, allowing you to simply pick up your telephone when your call is answered. The software can launch *YAM* so you can compose an email with the minimum of hassle, saving you the trouble of having to store duplicate contact details within *YAM*'s address book. You can also have *MegaBook* dial up a friend's BBS for you, or fax someone (although for the moment you'll have to be prepared to create your own fax script).

In fact, you can create scripts to launch and control pretty much any other ARexx-enabled program from within *MegaBook*. You don't even have to know much about scripting because you can record and save sequences simply by selecting the appropriate option from the *MegaBook* Extras menu.

MegaBook also supports external loaders and savers (which are referred to as MBIOs), which increase the file formats which *MegaBook* can read and write.

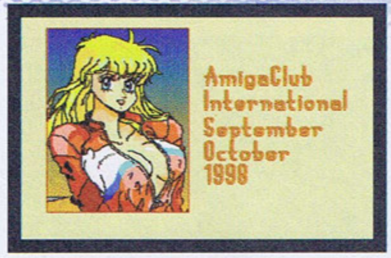


While computerised address book programs aren't always as handy as pocket-sized actual address books, they're certainly a lot easier to keep in order.

You don't have to stumble through page after page of scribbled out entries to find a rarely used contact number because you can simply key in a couple of letters and have the software find it for you instead. As address books for the Amiga go, *MegaBook* is about the best there is.

A highly recommended address organiser for your Workbench.

BY: Tom Bampton
WARE: Free registration
AVAILABLE FROM: Aminet (biz/dbase/AAA_MegaBook.lha)

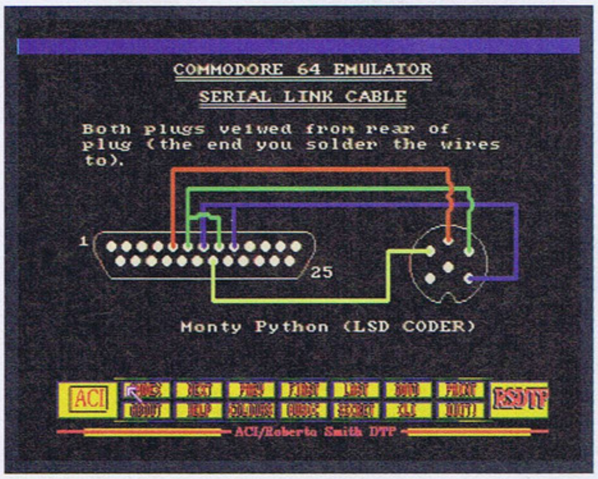




The inspiring title and menu screens.

glorious record shop in which conventional alphabetical organisation is frowned upon and you never know what you might turn up next. That the titles given to articles on the main index rarely give much away about the topics that are covered only adds to the sense of adventure which the reader feels.

Amongst the cryptically named outpourings this issue are a selection of technical projects, including details of how to patch CDDA output from your CD drive into your Amiga's audio output; how to wire up an elaborate turbo mouse; a few news snippets and press releases from the Amiga world; an introductory guide to printers and driver software; a couple of game reviews and tip files; and the obligatory smattering of jokes and Windows-bashing articles.



Useful help on a whole range of technical topics.

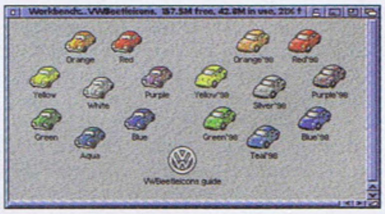
ACI magazines also tend to feature a few articles contributed by other Amiga diskmag producers, and this issue contains some material from AIO producer Chris Seward and a piece from The Point.

The latest ACI club disk, appropriately called *The Disk Disk*, features a selection of disk-related tools, including a formatting utility for drives greater than 4Gb in size, a selection of programs for users of Iomega Zip drives called Z100, and a few other interesting little offerings. It's nice to see a disk utility compilation aimed at users of more powerful, expanded systems, and it's also extremely heartening to see that user groups such as ACI continue to enjoy considerable success.

I look forward to seeing the next club magazine and disk, which will be available by the time you read this.

Twiddler's Disk 7

BY: Various
WARE: Various
PD LIBRARY: Classic Amiga Software
NUMBER OF DISKS: 1
PRICE: £1.00 + 75p P&P



Various tools and programs, including these VW Beetle icons.

This is the latest in a series of offbeat collections from Classic Amiga Software. Unfortunately, it doesn't really offer much in the way of quality. There are four folders containing software, which varies considerably in usefulness, and a fifth folder containing a fancy computerised version of noughts and crosses.

HTML Creator is designed to provide assistance to people putting together online image collections or CD-ROMs with a fancy front-end, and it's basically a series of little tools which cobble together an HTML index of images in a directory.

It might be worth a look for those of you without the time or inclination to hand-code HTML, but don't expect anything too spectacular.

Continued overleaf ➡

Tune Up is a car diagnostic program. Written in *AMOS*, it's a very simplistic affair, the idea being that you select a symptom from a list on the left of the screen and are presented with a series of possible causes. The suggestions are very brief – "Incorrect muffler", "Carbon build-up", that sort of thing – and unfortunately there is no attempt made to elaborate on solutions. At the end of the day, just checking your Haynes manual is going to be a lot quicker than loading *Tune Up*.

VWicons is a folder containing a selection of Beetle-themed *NewIcons*. There are eight classic Beetles and eight new 1998 models, and I suppose they might be of interest to fans of the cars.

Wodsoft's *Noughts and Crosses Deluxe*, meanwhile, didn't seem to want to work on my machine, despite my having diligently copied the appropriate font onto my system partition. Why anyone would actually want to play a computerised version of this most mindnumbingly tedious of pen-and-paper games anyway is totally beyond me.

Finally, we've already met *Z100* once this month, on the ACI club disk. It's a handy set of tools for users of Iomega Zip drives, and it's easily the most polished of the inclusions on this disk.

If you use a Zip drive, you would be better off getting hold of *Z100* by buying the ACI club disk – at least that way you would be getting a couple of reasonably useful extras into the bargain.

ONLINE UPDATE

Although by the time you read this the evenings will have well and truly drawn in and winter will be practically upon us, as I write the greyish light of an early September evening is streaming in through my window. It may still even be warm enough to sit outside the pub to sup a post-PD pint when I've finished this column.

Unfortunately, the summer lull on Aminet continues, and precious few updates have appeared recently in the world's largest file collection. Still, a couple of noteworthy programs have undergone changes of late, so those of you without a net connection might want to ask your PD library if they could download some of them for you.

***HippoPlayer*, the wonderful multi-format music module player which will run on just about every Amiga ever to have seen the light of day, has now reached version 2.44. *HippoPlayer* supports AHI, meaning it will work with a variety of sound systems too. Probably the most notable improvement in this latest release is the addition of MP1, MP2 and MP3 support using Mpega.library. *HippoPlayer* can be found in the mus/play directory of Aminet.**

On the subject of MP3s, a new MPEG encoder by the name of *Pegase* is now available. At the moment the software is still at a relatively early stage of development, but it is functional and the list of promised features looks impressive. To download a beta version of the program or to find out more about it, check out the *Pegase* homepage at http://perso.pacwan.fr/kakace/pegase/.

The latest version of Holger Kruse's Shareware TCP/IP stack, *Miami*, has also hit Aminet. Version 3.0d, which is distributed as a number of archives, several of which are required for its use, can be downloaded from the comm/tcp directory or from the *Miami* homepage at http://www.nordicglobal.com/.

AIO Compilation #1

BY: Various
WARE: Free
PD LIBRARY: Chris Seward
NUMBER OF DISKS: 2
PRICE: £1.50

This is a collection of seven back issues of *AIO* (*Amiga Information Online*), a monthly AmigaGuide-format magazine which is distributed via bulletin boards, Aminet and the *AIO* web page, which can be found at: (http://www.amiga1.demon.co.uk/aio).

For users without access to a modem, this two disk package offers a chance to take a look at what is an interesting magazine.

ODDS ON FAVOURITE

Odds On Favourite, or *OOF* as its author affectionately calls it, is a horse racing betting game for one to four players. Each player starts the game with £100 and the aim is to try to accumulate as much dough as possible in the course of a six- or nine-race meeting.

I have friends who regularly attend racing meetings and come back with their fifty pounds of betting money handily multiplied by a factor of five or six.

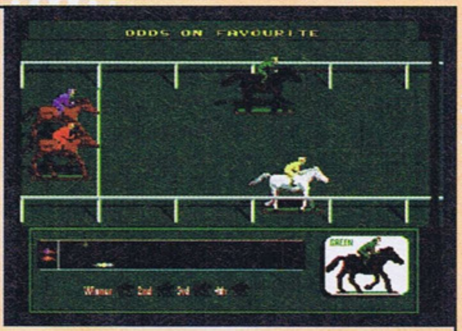
However, I have always turned down offers of accompanying these friends, because I fear that my uncanny ability to pick a loser – tried and tested over the years on events such as the Grand National and various key footballing fixtures – will end up costing me dearly. I'm normally a pretty shrewd judge of class, and if you asked me to pick a winner, particularly in a football match, I'd generally manage it. Unfortunately, the moment I have to back my prediction with hard-earned cash, things seem to fall apart.

Teddy Sheringham to score the first goal in an England victory over Germany in the European Championships of 1996? England to lose to Argentina in the quarter finals of France 98, having won their group and sneaked past Croatia? Argentina then to go on to win the World Cup? Yeah, right – all about as likely as my pick for the Grand National making it past the halfway mark. Still, at least France were my second favourite to win the World Cup.

All of which could be why I didn't especially enjoy *OOF*. On the other hand, it could instead be because I remember typing in a lengthy program listing for a practically identical horse race betting game about fifteen years ago, as a youngster with an Acorn Electron. *OOF* offers nothing more than *Electron Epsom*, except rather better graphics, and the music is considerably worse too.

The horses move in bursts, rather than all advancing together, and the action isn't so much gripping as, well, a trifle boring. A nice scrolling score sheet isn't really enough to redeem the game either.

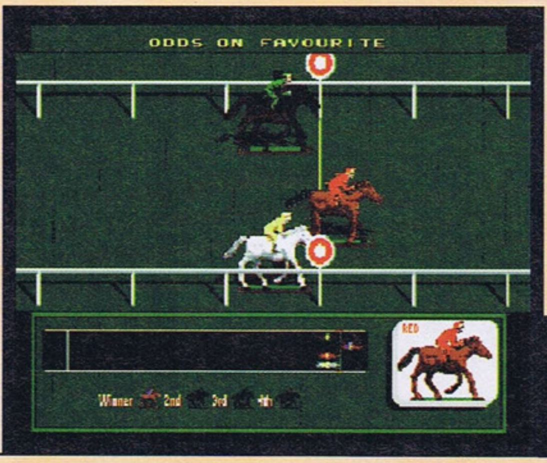
Still, if you're as unfortunate a gambler as I am, at least buying *OOF* rather than toddling down to the racetrack or the bookmaker is likely to save you quite a bit of money. Just don't expect anything like the same excitement.



The action is reminiscent of those ancient mechanical racing games found in seaside arcades...



The scrolling betting slip recording past form and how much cash you've got left.



Just when your horse is romping home, he stalls and waits patiently while another horse canters past the line. Doh!

BY: Eric Park
WARE: Licence
PD LIBRARY: F1 Software
NUMBER OF DISKS: 1
PRICE: £3.99

SUPER IT

Although it's now over a year old, *Super It* hasn't featured in these pages before, and this being something of a quiet month for games, I thought it deserved a mention.

Basically, *Super It* is a computerised version of It, or Tig, as we used to call it in these parts. Four players can compete, and the person who is It can Tig any of the others at any time, whereupon they become It. The game is played against the clock, and the person who is It when the time runs out is the loser.

The three Amigos obviously never played by Cheshire rules. Whereas when I was at school it was a well known law that "You can't Tiggy butcher" – a person who was It couldn't Tig back the person who Tigged them – it's perfectly acceptable to do so in *Super It*. Still, it seems that the rest of the world plays a different set of pub pool rules to the folks around here as well, so perhaps it's not surprising that Tig isn't the same everywhere as well.

Super It was written in *AMOS*, so it's not the smoothest or most polished game you're ever likely to play. What it is, though, is excellent fun, and with three inebriated chums you're bound to enjoy it a great deal.

Incidentally, the tunes used in *Super It* are apparently demo scene tunes from 1996, which could explain why they're toe-tappingly good. It's so refreshing to be able to listen to some decent in-game music, especially when there isn't a single one of those ghastly soft synth samples involved.

If you're after a fun multi-player game that won't tax too many brain cells, *Super It* comes highly recommended. Networked *Quake* it might not be, but it's certainly entertaining enough.







Play with up to three friends or against a computer opponent.



Avoid most of the icons that pop up as they generally slow you down and remember to keep an eye out for the timer ticking down.

BY: 3 Amigos
WARE: Licence
PD LIBRARY: Classic Amiga Software
NUMBER OF DISKS: 1
PRICE: £1.00 + 75p P&P



Another on-screen magazine, which incidentally features on the Amiga International Club magazine, also in this month's PD Select.

Since its inception in early 1997, *AIO* has been steadily growing in size, scope and quality. Beginning with issue 9, this compilation illustrates how *AIO* has evolved and improved as each month has gone by, right up to the latest issue, number 15.

Including news and views on the closure of *CU Amiga* magazine, an article on the sorry state of the Amiga games market, a transcript of an IRC conference with *Miami* creator Holger Kruse and much more besides, issue 15 is thoroughly absorbing reading. There are also plenty of reviews of games and utilities, and the results of competitions at a couple of recent coding parties.

AIO appears much more frequently (and reliably) than many diskmags, and on the whole it is well written and produced, even if a few spelling mistakes can slip in from time to time.

Those of you who haven't had a chance to read it before will find this compilation of recent issues makes fascinating reading.

Blue Rose Colour Fonts

BY: Eddie Barry
WARE: Free
PD LIBRARY: Eddie Barry
NUMBER OF DISKS: 6
PRICE: £5

A selection of quality fonts for use in videotitling work.





As a reviewer of PD and Shareware for several years, both for *AF* and for another (now long since departed) Amiga magazine before that, I've received bundles of disks from Eddie Barry on three or four occasions. These disks contain fonts and images intended for use in video work. Without exception, they've been packed with high quality material.

This latest six-disk pack comprises 26 colour fonts in 16- and 32-colour format, the majority incorporating both upper and lower case characters.

The fonts are squeezed onto five of the disks, with the sixth containing a slideshow which provides examples of the fonts while playing a suitably bouncy tracker module in the background. The fonts are ideal for users of video titling packages and multimedia production software, such as *Scala*, although anyone who dabbles in Amiga video production will find them extremely useful.

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As the year draws to a close, it becomes apparent that although Amiga dealers have complained about a lack of sales, there is little to complain about when it comes to new products. This time last year we were having problems getting new kit because everyone wanted to save it for the Cologne show.

This year we don't have enough pages to hold it all! This means that reviews of *Gold Ed 5*, *DOpus Magellan II* and the *IOBlix*, amongst others, will have to wait for our bumper Christmas issue.

Still, it's not as though there isn't plenty to get to grips with in this issue, from the large (like the CVPPC) to the little (the mini mouse comes to mind!). Have fun and see you in Cologne next month!

Ben Vost

AMIGA FORMAT'S REVIEW POLICY

... is very simple. ***Amiga Format*** is written by nearly all of the most experienced Amiga users in the world and what we say goes. OK?

WHAT OUR REVIEW SCORES MEAN

90+%	The crème de la crème. Only the very best, most versatile and effective products are awarded an **AF Gold** – the most highly prized rating there is.
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70-79%	Not a bad product but quite possibly one that needs a serious update.
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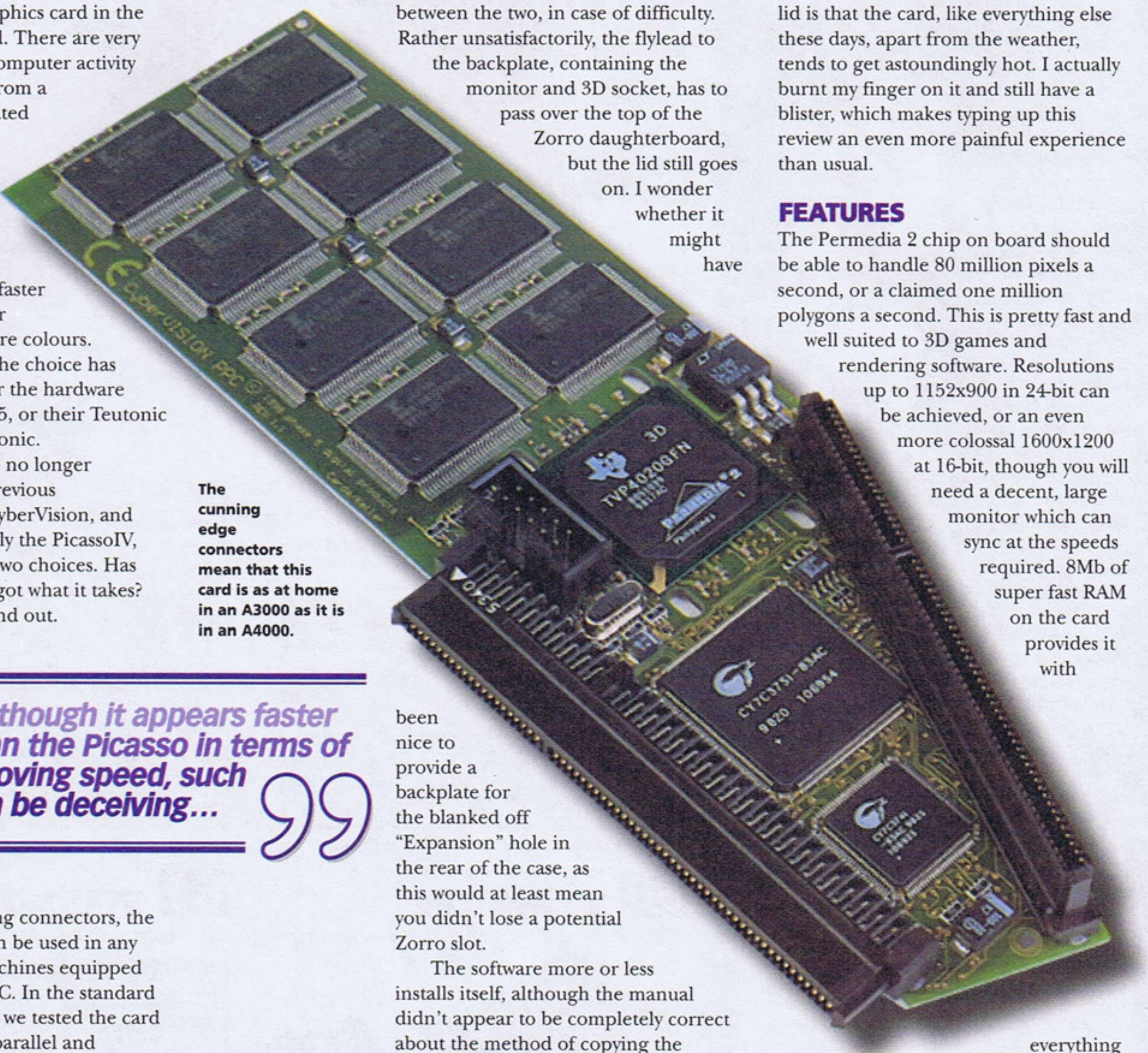
CyberVision PPC

Nick Veitch risks life and, er, fingers, to bring you his personal view of ***phase 5***'s latest offering.

You need a graphics card in the modern world. There are very few areas of computer activity which don't benefit from a supercharged, dedicated video chip chucking pixels at your screen. Even word processing, music making and just general Workbench use will benefit from faster screen updates, better screenmodes and more colours.

In recent times, the choice has been limited to either the hardware coming out of phase 5, or their Teutonic neighbours, Villagetronic.

Since phase 5 are no longer manufacturing the previous incarnations of the CyberVision, and Villagetronic have only the PicassoIV, there are really only two choices. Has the CyberVisionPPC got what it takes? Let's plug it in and find out.



The cunning edge connectors mean that this card is as at home in an A3000 as it is in an A4000.

> ***Although it appears faster than the Picasso in terms of raw pixel-moving speed, such things can be deceiving...***

INSTALLATION

Thanks to two cunning connectors, the odd-shaped board can be used in any variety of desktop machines equipped with a CyberStormPPC. In the standard desktop A4000 which we tested the card with, it sat vertically, parallel and perilously close to the Zorro daughterboard. In a moment of nervousness, we inserted a bit of plastic between the two, in case of difficulty. Rather unsatisfactorily, the flylead to the backplate, containing the monitor and 3D socket, has to pass over the top of the Zorro daughterboard, but the lid still goes on. I wonder whether it might have been nice to provide a backplate for the blanked off "Expansion" hole in the rear of the case, as this would at least mean you didn't lose a potential Zorro slot.

The software more or less installs itself, although the manual didn't appear to be completely correct about the method of copying the libraries across. I'm sure most of you would be able to manage it anyway. The only thing to be said before we close the lid is that the card, like everything else these days, apart from the weather, tends to get astoundingly hot. I actually burnt my finger on it and still have a blister, which makes typing up this review an even more painful experience than usual.

FEATURES

The Permedia 2 chip on board should be able to handle 80 million pixels a second, or a claimed one million polygons a second. This is pretty fast and well suited to 3D games and rendering software. Resolutions up to 1152x900 in 24-bit can be achieved, or an even more colossal 1600x1200 at 16-bit, though you will need a decent, large monitor which can sync at the speeds required. 8Mb of super fast RAM on the card provides it with everything it needs and it enables you to double buffer at higher resolutions too.

phase 5 have taken the unusual step of including a special connector for those 3D LCD shutter glasses, capable of helping you see a realistic and colourful, if slightly flickery, 3D image.

Now let's take a look at some of the things you just can't do. For a start, there are no draggable screens. It's not a major deal, and cards that use Picasso96 don't support it, but it's an unfortunate flaw for those who are used to being able to see what's happening on several screens at once. It's also rather unfortunate if you use software which makes use of this, though the only notable programs that spring to mind

WHAT IS A GRAPHICS CARD?

Any graphics card is simply an alternative display device to the custom chips on your Amiga. They usually have an output for a monitor and they provide extra screenmodes not available on the Amiga (otherwise there would be no point in having them).

Modern Amiga graphics cards all provide true-colour 24-bit displays and can drive much higher screen resolutions. They are also many times faster than the native chipset at many operations, notably software sprite operation, because of the way their screens are organised in memory (chunky, rather than planar).

Depending on the card, you can also get any number of scandoubler and flicker fixer features. The Picasso IV features a built-in flicker fixer which will effectively de-interlace the standard high vertical resolution displays so you can actually see them without going blind.

The cards are mainly dependent for features on the particular display chip they use. For instance, the CV3D has a Virge, which can support various OpenGL functions (handy for rendering software like *Tornado*) and overlays. The Picasso, as you will see this month with the Paloma, can also overlay 24-bit screens for Picture in Picture applications.

are *ImageFX2.0*, *CanDo* and a few video utilities. Quite simply, they won't work properly on this card (although they don't work on the Picasso card either).

Rather confusingly, the last minute notes also say that, at present, the CyberVisionPPC is unable to support streaming video. However, it seemed perfectly capable of playing back Mpegs through *Isis*, so it isn't entirely apparent what this problem might be. phase 5 claim they will be working on a 3D emulation for this feature.

Another deficiency is the lack of software which can actually take advantage of the chip. phase 5 have always been very good at hardware but unfortunately that's there they draw the line. Without any software which can take advantage of the special 3D capabilities of the display chip, what's the point of having it? It could be likened to having an amphibious car in the middle of the Sahara.

BENCHMARKS

All figures are in iterations per second. The index value is just an easy way to compare the CyberVision PPC to the PicassoIV. It's essentially the CVPPC value divided by the PIV one. As such, an index value of 4 indicates the CVPPC is four times as fast, while one of .05 means it runs at a twentieth of the speed.

TEST/SYSTEM	CVPPC	CV3D	PICASSOIV	REL. INDEX
RectFill()................	9721	3784	5949	1.63
RectFill() Pattern........	139	1354	4604	0.03
WritePixel().............	184135	179838	99809	18.45
WriteChunkyPixels().......	24347	25535	612	39.78
WritePixelArray8()........	933	505	582	1.60
WritePixelLine8().........	14716	12679	13908	10.59
DrawEllipse()............	16845	9998	10772	15.64
DrawCircle().............	18378	10648	11683	15.74
Draw()...................	20496	17130	7408	2.77
ScrollRaster() X..........	237	249	395	0.60
ScrollRaster() Y..........	220	249	377	0.58
PutText()................	6625	8368	9972	0.66
BlitBitMap().............	403	1042	8417	0.05
BlitBitMapRastPort()......	391	971	6997	0.06
BitMapScale()............	64	44	84	0.76
		INTUITION		
OpenWindow().............	49	44	149	0.33
MoveWindow().............	481	425	653	0.74
SizeWindow().............	110	101	218	0.51
CON-Output...............	250	219	522	0.48
ScreenToFront()..........	49	6	100	0.49

All tests using P96Speed 0.17 – ©'97/'98 by Jens Langner. All run on A4000, CPU: 68060/50 MHz + PPC (200MHz), OS/WB/Setpatch: V39.106/V40.42 – V43.6, chip/fast: 2.0Mb/75.5Mb. All tests run on equivalent 8-Bit 640x480 screens.

COMPARISONS

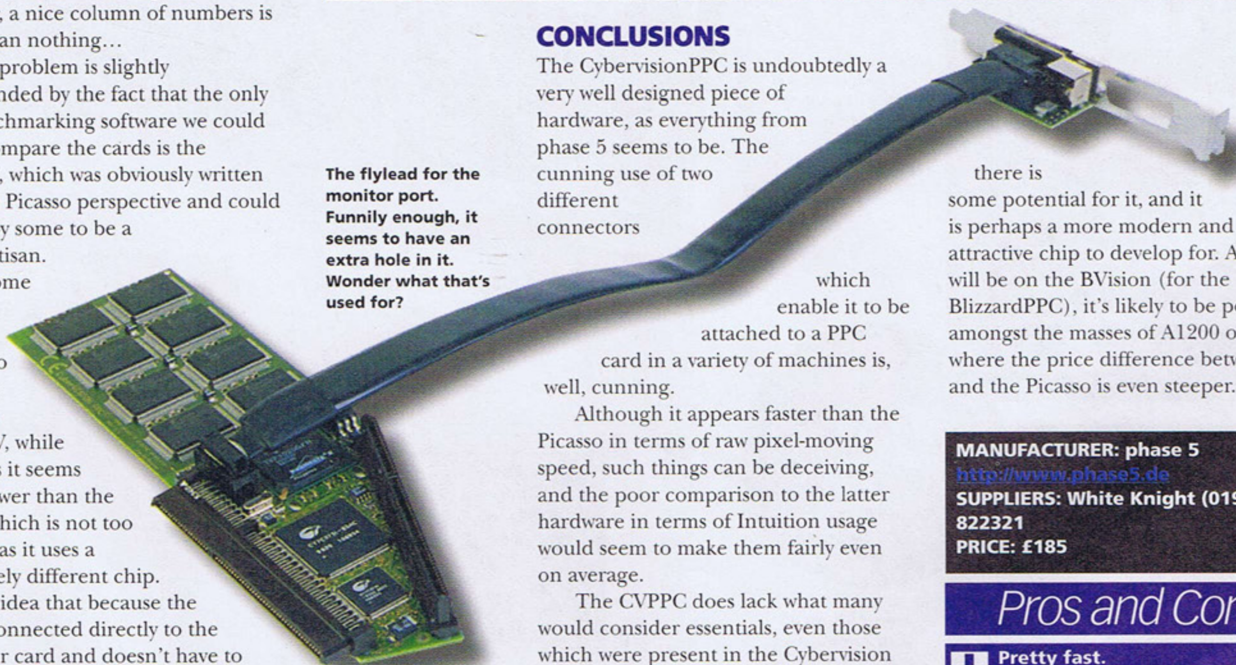
So how does the CybervisionPPC compare to the other contenders available? You probably know how we feel about benchmarks here at *AF* – they're probably second only to government statistics in conveying erroneous and misleading data. However, a nice column of numbers is better than nothing...

The problem is slightly compounded by the fact that the only real benchmarking software we could use to compare the cards is the *P96Speed*, which was obviously written from the Picasso perspective and could be said by some to be a little partisan.

In some areas it does appear to be faster than the PicassoIV, while in others it seems to be slower than the CV3D, which is not too unusual as it uses a completely different chip.

The idea that because the card is connected directly to the processor card and doesn't have to compete for attention on the Zorro bus is a good one, but the speed of the card is obviously dependent on the speed of the display chips, as well as the need for them to have a clear route to the processor.

In real use, the card seemed to play Mpegs fine, had little trouble with Intuition (apart from a small bug which sometimes repositions the pointer if it reaches the top line of the screen, but it'll be fixed so don't fret). It seemed to be a little bit faster with *Quake* too, despite the fact that the special CGFX display routines don't work with it.



The flylead for the monitor port. Funnily enough, it seems to have an extra hole in it. Wonder what that's used for?

CONCLUSIONS

The CybervisionPPC is undoubtedly a very well designed piece of hardware, as everything from phase 5 seems to be. The cunning use of two different connectors which enable it to be attached to a PPC card in a variety of machines is, well, cunning.

Although it appears faster than the Picasso in terms of raw pixel-moving speed, such things can be deceiving, and the poor comparison to the latter hardware in terms of Intuition usage would seem to make them fairly even on average.

The CVPPC does lack what many would consider essentials, even those which were present in the Cybervision 3D. Not just a flicker fixer, which these days is of arguable use, but the lack of a pass-through, and consequently a scandoubler, is quite an omission. It's basically telling you that phase 5 feel that the Amiga's custom graphics chips are completely redundant.

However, at £185, it's significantly cheaper than the £250 Picasso. It might be tempting to go for the CyberVision 3D, though it would appear that very little software is now going to be developed for the Virge chip which resides on it. There isn't any software for the Permedia 2 either, but at least there is some potential for it, and it is perhaps a more modern and attractive chip to develop for. Also, as it will be on the BVision (for the BlizzardPPC), it's likely to be popular amongst the masses of A1200 owners, where the price difference between it and the Picasso is even steeper.

MANUFACTURER: phase 5
http://www.phase5.de
SUPPLIERS: White Knight (01920) 822321
PRICE: £185

Pros and Cons

- **+ Pretty fast.**
- **+ Reasonable price.**
- **– No flicker fixer/scandoubler.**
- **– No pass through.**

OVERALL VERDICT:
This quality of the card depends on what software is developed for it.

82%

Paloma

ON THE CD

You can find the latest version of the *PalomaTV* software on our CD in the -In_the_Mag-/Paloma directory.

Now you can really veg out in front of your computer. As if typing in HTML wasn't enough, **Ben Vost** now watches TV too.

ON THIS MONTH'S CD
AFCD33:-In_the_Mag-/Paloma/

There's just one thing to point out here. Umm. Sorry, got distracted for a moment there. What was I saying?

Oh yeah. Sorry, sorry, sorry, completely lost concentration. Where was I? Oh yeah, I have to say that having a TV set on your Workbench can be really distracting. It's also really cool if you already have a Picasso IV. Although it's probably a bit overpriced considering what you don't get, it's still a useful enough tool that it repays its value over and over again, and you can, like, totally watch TV on it, man.

For those of you not overly familiar with the modularity of Village Tronic's most excellent product to date, the Picasso IV is not only a mere graphics card, it's one that has its own PCI bus which allows for add-on modules that fit directly on the card, saving Zorro slots and space inside your machine. The first add-on available was the 16-bit sound card, Concierto. It wasn't brilliant, but you got 16-bit sound output with very little fuss. If you wanted a fully-fledged card for 16-bit audio, for CD mastering, say, then the Prelude is much better.

The next add-on available, the Pablo, was a video output module that allowed you to record 24-bit animations to video tape.

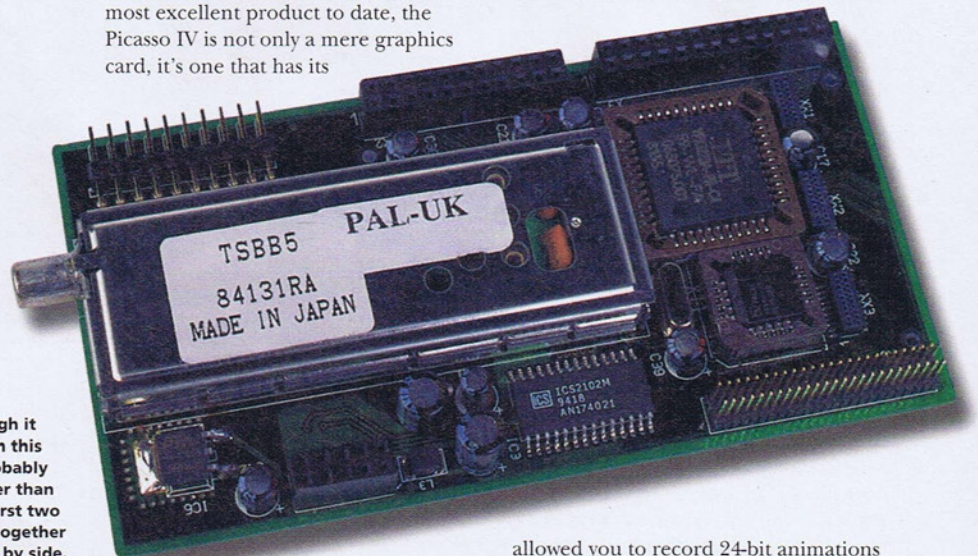
Now we come to the Paloma. This plugs in next to the Concierto card on the board and comes with an adaptor in order to be able to plug a TV aerial lead into the back of the Picasso IV. After the very simple fitting of the Paloma to the



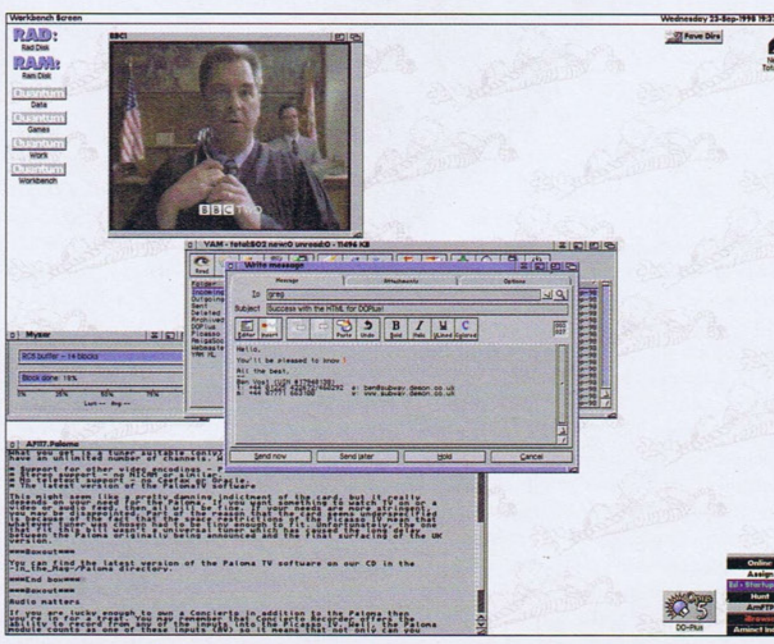




Gran Turismo on your Amiga? Yes, thanks to Paloma.



Although it looks huge in this grab, it's probably no bigger than your first two fingers put together side by side.



See if you can work when *Maximum Bob's* about to start!

AUDIO MATTERS

If you're lucky enough to own a Concierto in addition to the Paloma then you're in for a treat. You may remember that Concierto Recorder offers the ability to record from any of the inputs into the Picasso IV. Well, the Paloma module counts as one of these inputs (AV) so it means that not only can you grab pictures from video signals, you can grab audio too. Obviously, copyright details need to be mentioned and you shouldn't just use the Concierto to pirate TV programs, but it can be very handy to be able to grab from video or audio as and when you like.



Picasso board (an easier fit than the Concierto, I found), you're pretty much ready to go. If you've been keeping your Picasso's FlashROM up-to-date you'll have no problem when you boot, but if the add-on module isn't recognised then all you need to do is boot from the disk that comes with it. It will then automatically install the latest version of the Picasso FlashROM that will enable the early boot menu for the Picasso. From here, you can input the settings for the card and the add-ons.

WHAT'S IN THE BOX?

When you open your box you'll see the Paloma, the aerial adaptor, an S-VHS adaptor to allow you to input CVBS

> "...you can carry on working, or at least try to, while the TV carries on – you can't do that if you have to switch channels..."

(composite) and Picasso IV's default Y-C connectors, along with the usual manual and floppy for installation. You also get a tuner that's suitable for the UK market only, which can seemingly have an unlimited number of channels.

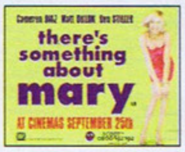
What you don't get is support for other video encodings – PAL B/G, NTSC, SECAM and so on; stereo support – no NICAM or similar; teletext support – no Ceefax or Oracle; or the latest version of the *PalomaTV* software.

This might seem like a pretty damning indictment of the card, but it depends on your need for the Paloma. If you want something to watch TV on, or a CVBS or Y/C video feed, then all will be fine. If your needs are more stringent, you may be disappointed.



Grabs can be saved as YUVN (we found that you can load them in *ImageFX*), or ILBM, which takes a lot longer.







Don't worry, it's supposed to be in black and white.



Part of the reason that the card seems underspecified is because of the fact that the space restrictions of the Picasso IV mean that whatever tuner was chosen had to be tiny enough to fit.

Unfortunately, the one that fit this bill wasn't a universal tuner, and this has caused the long delay between the Paloma originally being announced and the final surfacing of the UK version.

It has to be said that a lot of people will be using their A1200s on a TV set and will be unimpressed with the Paloma's ability to show you TV on your Workbench, but that's missing the point somewhat. The fact is that the Paloma is only suitable for people with a Picasso IV and they certainly won't be displaying their screen on an TV set.

WHAT'S THE POINT?

Even so, what's the benefit of being able to display a TV picture on your Workbench screen, bearing this in mind? Well, other than the obvious benefits of being able to "sample" the screen and audio, there's the fact that you can carry on working, or at least try to, while the TV carries on – you can't do that if you have to switch channels on your A1200's TV.

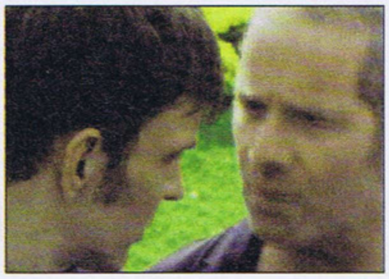
There are other benefits too. Because there's an input feed for the Paloma that supports composite and S-VHS, there's no reason why it can't be used for video surveillance cameras to look over your front or back garden, while you sit safe and sound in your Blofeld-style computer room. It may be obvious, but you can also hook up your PlayStation, Nintendo or other console and play that on your Amiga.

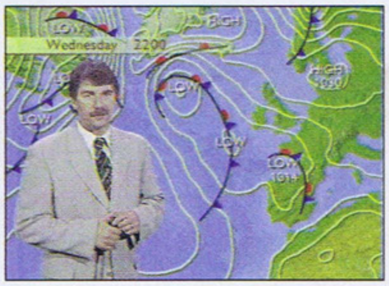
WINDOWS

The overlay function of the Picasso IV means that you don't need to be on a 24-bit screen to get good quality TV. Even so, the overlay function of the Picasso IV means that you can be on an 8-bit screen, only with a 24-bit PIP TV window. However, this window needs to be at the top of the stack in order to look good. If it's overlaid with another window, even a little bit, then the image in the window gets seriously degraded.

Fortunately, the *PalomaTV* software







allows you to not only view TV on its own screen (no chance of having windows overlap there), but also to put the window at half- or even quarter-size.

The window is also freely resizable so you can scale it to whatever size you like, but it's disappointing that it's not aspect ratio fixed as this means that your TV picture can be very squashed. Also, your grabs are only at the size of the picture, despite the fact that the whole signal has to come into the Paloma, which is slightly disappointing.

Overall, this is an excellent gizmo that really means the only time you'll have to leave your computer now is to eat, drink and, if you do it, sleep. AF

SUPPLIED BY: Blittersoft (01908) 261466
PRICE: £99.95
REQUIREMENTS: Picasso IV

Pros and Cons

- + Great for showing off.
- + Good for grabs or samples.
- + Very easy to fit.
- − Not highly specified.

OVERALL VERDICT:
If you can afford the admittedly high price for this add-on it's well worth it.

85%

Kylwalda

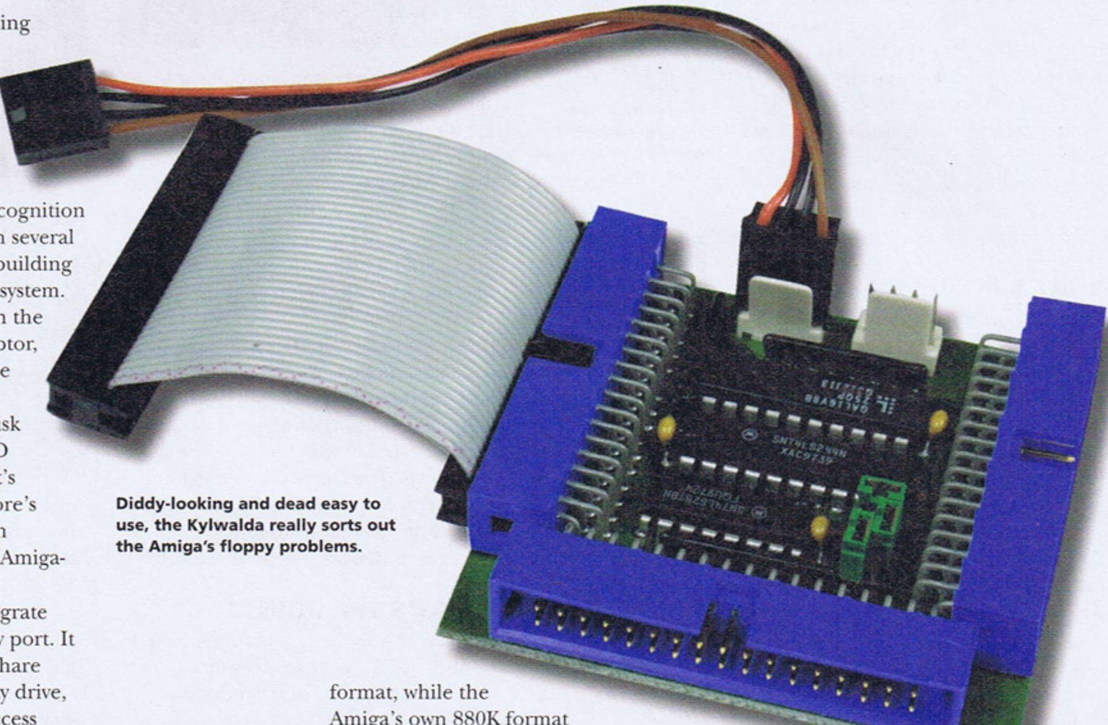
Simon Goodwin recaps floppy history and tests a new disk gizmo from Elaborate Bytes.

Kylwalda is a kind of missing link for Amiga floppies, combining the advantage of cheap drives, higher densities and transfer rates with total Amiga compatibility – auto-booting, custom formats, disk change recognition and simultaneous operations on several drives. It's attractive to anyone building or expanding a modern Amiga system.

Kylwalda can do two jobs. In the simplest case it works as an adaptor, allowing a cheap HD-compatible drive to be connected to the Amiga's DD (double density) disk controller. You don't get full HD (high density) operation as that's beyond the power of Commodore's Paula chip, but the combination removes the need for a special, Amiga-only drive.

Secondly, Kylwalda can integrate Catweasel and the Amiga floppy port. It allows both disk controllers to share access to a standard high density drive, permitting double-speed HD access through Catweasel, yet preserving access to protected disks through Paula.

This option removes the need to keep a redundant drive on an expanded or towered-up Amiga.



Diddy-looking and dead easy to use, the Kylwalda really sorts out the Amiga's floppy problems.

PAULA'S STORY

In the beginning there was Paula, the Amiga's hard-working Peripheral Logic Array, orchestrating sound, serial and floppy transfers. Paula was a masterpiece but in this decade it shows its age.

Paula was the only part of the original Amiga chip set to survive unmodified into AGA systems. This was because of the difficulty of redesigning such a closely-coupled, finely-timed device, and because programmers are so familiar with the original that changes would almost guarantee incompatibility.

Paula is still strong, allowing arbitrary track layouts, sector sizes and synchronisation. It uses far less CPU time than conventional controllers, can write to up to four drives at a time, rather than one or two, automatically senses and signals disk changes and supports vintage FM and GCR formats, as well as the now-ubiquitous MFM.

Like a floppy photocopier, in its heyday Paula gobbled up virtually any format, while the Amiga's own 880K format remained mysterious to simpler conventional systems, constrained to 720K on the same DD media.

The big limitation is that Paula is a single-speed device. Data burbles out at a rate of 500 kilobits per second, ideal for 'double density' drives with capacities of up to about 1Mb per disk. This is too slow to take full advantage of modern HD and ED floppies though, which spin at the same rate but pack bits two or four times more densely.

> "Kylwalda is cheap, neat and useful, merging old and new Amiga technology for the best of both worlds."

DUAL CONTROL

It might seem hard to see the need for Kylwalda when every Amiga comes with an authentic standard drive (apart from A1200s hastily cobbled together by Amiga Technologies). There are also plenty of higher-density options, including Commodore's own twin-speed A3000 and A4000 HD drives, LS-120s with support for PC and Mac 1.44Mb formats, HD and ED buffered adaptors from Power Computing and Catweasel controllers for cheap PC drives. All of these work, though speed and compatibility vary. The Commodore and Power solutions allow more data per disk but run at DD rates, slowing the data flow to mimic older drives.

Some favour another port over the standard controller. LS-120s use IDE while Catweasel hangs off Zorro, IDE or the A1200 clock port, trading compatibility for increased speed but draining more processor time.

Hybrids like Power's adapted models are read-compatible but need software patches to write to disk.

You can combine the benefits of Amiga flexibility and extra disk capacity, but without Kylwalda you end up with a mixture of drives and special rules for each. Genuine Amiga drives are bootable and support protected software but they're limited to DD formats and transfer rates. LS-120 and Catweasel drives need extra software so they only work with programs that take the long route through the operating system, ruling out auto-booting and most games.

TEST DRIVE

Drive and disk controller 'standards' vary between Amigas and PCs. Amigas support up to four drives, switching their motors individually with a two-bit drive number and motor selection pulse. PC drives use simpler circuits with direct signals to select either motor. Amiga drives report disk changes automatically, whereas PCs typically ignore such events.

You can't plug a cheap PC drive into an Amiga without adding circuitry which will latch the drive and motor selection signals, report the drive type and monitor disk changes.

Enter Kylwalda, Jens Schoenfeld's solution, idiosyncratically named after the small, green, frog-assistant of children's TV wizard, Catweazle.

Kylwalda merges signals from old and new controllers, restoring bits that IBM left out, giving full Amiga compatibility and fast HD options.

VAGARIES

One limitation of Kylwalda is that it won't work with standard Amiga drives, either the original Commodore 880K variety or the twin speed Chinon HD variants. It requires a 'standard' PC drive and while these are cheap and widely available, they vary in detail, as you should expect in the PC jungle.

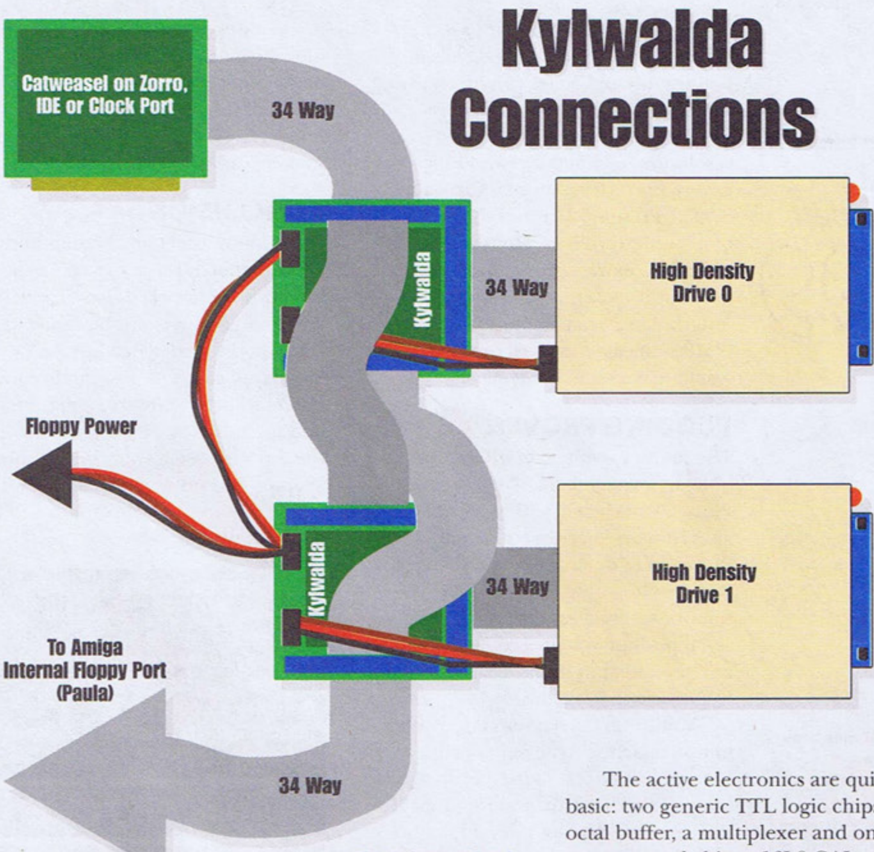
Most PC drives have a 34-way, IDC pin-field at the back, with a locating slot to identify pin 1 and a four-pin power connector, just like Amiga ones. However, I've encountered 'PC standard' drives from Compaq and Amstrad with a 26-way IDC and no power connector, Sony ones with the locating slot on the wrong side, requiring plastic surgery on the socket or the Kylwalda lead, and even one with 5.25" drive connectors – a big power socket and a card edge – rendering it incompatible with Kylwalda's supplied leads (Compaq again).

The Sony works a treat in Catweasel's EX0: ultra-high density format, but the Compaq rejects the last fifth of the disk, negating the extra capacity. Some Amigans squeeze 1.5Mb onto HD floppies with Aminet's HiDensity hack, Paula and an adapted HD drive, like the Panasonic model in late-production Amiga Technology A1200s.

This is compatible with Kylwalda after a small tweak. The *GCRDISK.DEVICE* hack bottled out after successfully formatting just one track on my Catweasel-free A3000, but this pushes Paula way beyond her specification. The same drive did work, in standard HD formats, after the addition of Catweasel.

Most PC drives have a fixed unit number, resorting to cable tricks to distinguish between two drives. Kylwalda expects it to be jumpered or hard-wired as 'drive 1', so drives from other computers may need tweaks for correct selection.

These aren't criticisms of Kylwalda, which does the best it can with the drive provided and proved resilient, despite all my experimental cable twists and jumper fumblings – they're just reminders that PC compatibility is a moveable feast.



This is how to hook up two HD floppies with Kylwalda.

HARDWARE

The 63mm-square board comes with two short cables, each with appropriate plugs at each end, carrying power and data to the drive. Signal timings require that you put the adaptor near the back of the drive with longer cables from the controllers, rather than next to Paula or the Catweasel. It's a tight squeeze in the space between the A4000 floppy drive bay and the power supply air vent. An insulation panel under the adaptor guards against short-circuits.

The active electronics are quite basic: two generic TTL logic chips, an octal buffer, a multiplexer and one pre-programmed chip, a 16L8 GAL, about as simple as custom chips can get but still capable of emulating half a dozen dedicated devices. Three SIL resistor terminator packs, capacitive decoupling for each chip and a bank of three configuration jumpers on an eight-pin bed complete the hardware.

The review model came with two A4 pages of German documentation, swiftly followed by an emailed English translation. This explains drive variations and jumper options for usage with and without Catweasel, as drive DF0: and DF1; the Amiga's internal floppy connector does not support DF2: or DF3. Kylwalda can also integrate ISA Catweasels with PC controllers.

No software is supplied but none is needed as Kylwalda switches between controllers automatically, depending on which recognises the format.

A selection tool is on the web page, useful for comparative testing when you've configured more than one controller to recognise a given format.

Normally you'd only mount a given file system on one controller, say, DF0: (880K), DS0: (984K) SP0: (800K) and HF0: (1520K, with luck) for Paula, with PH0: (1440K), TH0: (1760K) and EX0: (2380, ditto) for Catweasel.

This way you always get the best controller for a given format, although the more you mount, the longer you await recognition after a disk change.

Kylwalda is cheap, neat and useful, merging old and new Amiga technology for the best of both worlds. It's a good buy, especially if you still exchange floppies regularly.

SUPPLIER: Golden Image (0181) 900 9291 Power Computing (01234) 851500
PRICE: £15
MAKERS: Elaborate Bytes,
http://www.jschoenfeld.com

Pros and Cons

- \+ Versatile and expandable.
- \+ Well made, yet low priced.
- − A tight fit in some drive bays
- \+ If it didn't exist you'd have to invent it. Luckily Jens did!

OVERALL VERDICT:
Another Schoenfeld connector-fest!

92%

SpeedMouse Mini

Simon Goodwin takes Epic's latest alternative pointing device for a walk.



This is likely to be the smallest rodent you'll ever attach to your Amiga.

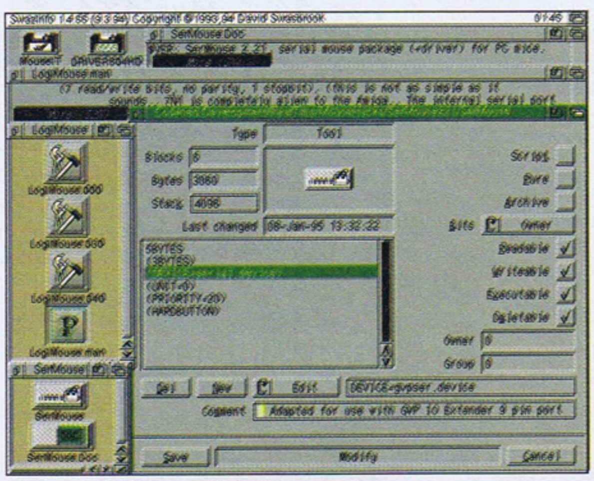
SpeedMouse Mini is a tiny, two-button mouse that plugs into the serial port, rather than an Amiga controller port. It comes with a cable adaptor and with Amiga and PC drivers on DD and HD disks. It's an interesting alternative to conventional Amiga mice, as well as being reasonably priced, well integrated and nicely packaged.

Amigas and mice got along from the start, having two dedicated input ports that counted pulses directly and all necessary system software built-in, from Workbench and Intuition to Input and Pointer preferences. PCs start from scratch, requiring a dedicated RS-232 serial port, mouse driver software and a complete GUI, be that Windoze, OS/2 or Linux with added X. PC mouse counters report at a leisurely 1200 baud.

> Alternative drivers for Logitech mice are provided, boasting even more options, such as Shell diagnostics...

Despite complications and inefficiency, the gargantuan PC market attracts many more styles of mouse, tablet and trackball for PCs than can be plugged straight into Amigas. Mass production for a fashion market brings cheapness and variety. Epic have neatly diverted this profusion to the Amiga by compiling *Mouse-It*, a disk of the best Amiga serial mouse drivers for Workbench 2 and later, with an adaptor to convert the full Amiga RS-232 serial port to the cut-down PC variety.

Epic bundle *Mouse-It* with serial pointing devices, picked to fill gaps in the Amiga range, though it's also available on its own. The new *Mouse-It* combo accompanies Logic3's SpeedMouse, which is the smallest, lightest mouse I've ever used, featuring two nice, positive microswitches.



Icon ToolTypes ease SerMouse reconfiguration.

The box claims a 'dynamic resolution' of 6,000 DPI and Epic's advert asserts a yet more implausible 8,000 DPI, some 30 times the pulse rate of a standard rodent. However, this is typical PC extrapolation, best filed in the round wicker cabinet with 'interpolated scan resolution' and 'PMPO' speaker ratings, phrases which would make even Tandy blush.

PUDDING PROVEN

The pointer scoots around impressively quickly, traversing an 800x600 pixel Picasso Workbench within a quarter of an AT mouse mat. System Input Preferences determine speed; I use 2, the middle setting. It's not quite as smooth as a real Amiga mouse because serial position updates come at about half the rate, but it's far more responsive than PC *UAE*.

You'll still need a standard Amiga mouse attached to be able to click in system alert boxes (Gurus) or to access the early boot menu, and for any other software that decides to avoid the OS. This includes vintage games like *Populous, Settlers* and *Lemmings,* which 'hit the metal', ignoring pointer messages from the serial port.

A few programs like *ProTracker* are system-ambivalent. They use the system for movements but read the left button directly. This is very tempting when it takes just one line of assembler as opposed to a slew of OS calls, so an optional hack in *SerMouse221* emulates Amiga mouse button whacking.

SerMouse is under 3K long and runs from an icon with ToolType configuration for any serial unit. It supports two common protocols: Mouse Systems three button (five-byte) messages and the cruder two button, three-byte Microsoft serial standard.

Alternative drivers for Logitech mice are provided, boasting even more options, such as Shell diagnostics and versions for 68000, '020 and '040 processors. I hardly investigated this, despite hackerish potential, as Patrick van Beem's *SerMouse221* suits me fine.

The *Mouse-IT* software is freely available elsewhere but it's still good value at under a fiver, with the 9- to 25-way adaptor and the prettiest colour package yet for a PD compilation.

You get half a page of printed instructions and much more on floppy, plus the latest drivers with added icons on a bootable Amiga system disk, still only half full. Compare this with a 'modern' Wintelimouse installation, soaking up 1.6Mb of hard disk space…

CONCLUSION

SpeedMouse suits small hands and a delicate touch. It tracks well, despite its low mass, and worked first time with Zorro serial ports and the Amiga port adaptor. If the idea of a lighter, faster mouse appeals, and you can live with system-friendly software, it may merit an impulse purchase. Even if the thrill of the tiny puck wears off, the bundled adaptor and software leaves you with easy access to a whole panoply of PC pointing peripherals.

SUPPLIER: Epic Marketing, 0500 131486
http://www.epicmarketing.ltd.net
PRICE: SpeedMouse plus £10.00
MOUSE-IT package £4.99
Delivery £1.00
REQUIREMENTS: Kickstart 2+, free serial port

Pros and Cons

- + Excellent Amiga system integration.
- + Smooth and very precise operation.
- − It requires a dedicated serial port.
- − Incompatible with hardware-bangers.

OVERALL VERDICT:
A nifty stocking-filler.

86%

Back in Time

"It's even got a tune you can whistle," sighs **John Kennedy**.

Does the name "Ron Hubbard" mean anything to you? If not then you're probably too young to appreciate this audio CD.

Way back in 1982, Commodore launched the C64, creating one of the most popular computers of the day. Although I was a committed Spectrum/CPC person at the time, I would often visit my mate Nick (I wonder what ever happened to him?) who had a C64 and who seemed to play every game going.

> **…Chris Abbott has used modern instruments to totally re-create the songs in high-quality, crystal clear format.**

Pardon me for that piece of nostalgia, but that is exactly what *Back in Time* is all about. The music which accompanied the various C64 games was basically in a class all of its own. This wasn't merely due to the advanced SID music chip, but also to the great talent of people like Ron Hubbard and Martin Galway.

Rather than take the easy way out and simply record the game soundtracks, Chris Abbott has used modern instruments to totally re-create the songs in high quality, crystal clear format. With some remixing help from Hubbarb himself, this is one professional CD.

OK, so at heart the tracks are still the theme tunes to games such as *Monty Mole*, *Arkanoid*, *Wizball* and *Rambo*, but that's the entire point. Not only do you get a chance to relive those days spent sitting around a giant, old, colour TV, frantically waggling joysticks, but you get music which is as well produced as anything you'll hear on the radio.

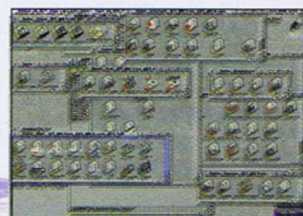
It's clear that this was a personal project of Abbott's, and he's spent a great deal of time getting everything perfect. 15 tracks of memory-jogging, classic C64 anthems. Lovely.

DISTRIBUTOR: High Technology Publishing, PO Box 260, Bromley BR2 0ZG. Fax: 0181 402 0926, email: CD@c64audio.com
PRICE: £12.99 (plus p&p)

OVERALL VERDICT:
Top quality music from all your favourite C64 games.

90%

Aminet 26



Cor, it seems like only two months since the last Aminet CD came out. **Ben Vost** looks at the latest.

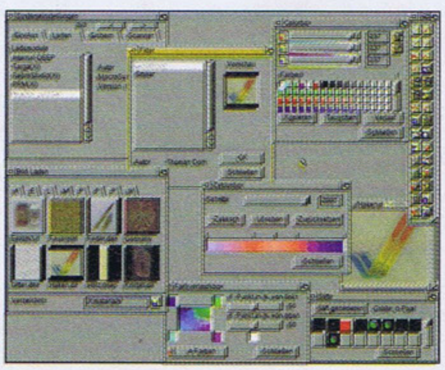
Solid and dependable – that's what the Aminet CDs are. They come out every two months and you can always rely on them to a) be full and b) work. The trend for the Aminet CDs to offer full-price software continues on this CD with *XiPaint v4*, a program that never found much popularity in the UK because of its cryptic interface and its slight bugginess.

Version 4 is fine though, if a little slow. This CD claims to hold more than 950Mb of material, 30Mb of which is devoted to *XiPaint*. There are no new additions to the way the CD works (don't fix what ain't broke) and the software covers the time between CD25 being made and July 1st.

The only thing you could say was bad about Aminet CDs now would be that the windows seem to be snapshot all over the place. The icons inside them are fine, but the actual windows themselves seem to pop up anywhere on your screen. As you can determine for yourself, this is being really picky.

There isn't really that much more to say about the Aminet CDs. You may have noticed increasingly desperate attempts to say something interesting and new about them every time we get new ones in, but since they're consistently good we may as well simply repeat the copy from the previous review and change the name of the commercial software. Then we can add a *Format* Gold logo and a score in the nineties somewhere and that's all there is to it – hey presto, an Aminet review kit has been invented.

XiPaint 4 is more stable, easier to use and it's your bonus free software on the latest Aminet CD.



The only differences between the scores tend to be because of the commercial software offered and the quality of the submissions to Aminet for that CD. As such, it isn't really the fault of the CD if we don't give the current Aminet CD as good a score as the previous one. Having said that, this one is pretty good…

SUPPLIER: Weird Science (0116) 246 3800
PRICE: £10.99
REQUIRES: Any Amiga with a CD-ROM drive and WB2.x

OVERALL VERDICT:
Another cracker from the Aminet stable. _XiPaint 4_ is far superior to earlier versions.

92%

Typhoon

An '030 accelerator may seem like old hat, but *Power* are bringing a new one out. Ben Vost finds out why.

Although it may seem that the only market these days is for accelerators with '040s, '060s or PowerPCs, the fact of the matter is that there are a lot of Amiga users with only a bog-standard '020-based A1200 because they haven't got the money for anything faster.

This accelerator board will not only help them with their speed and memory problems, but also with the addition of a vital CD-ROM drive.

The Typhoon is a very cheap card at under a hundred pounds, and it's also very well specified. Remember the old days when we told you that to buy a processor card without buying some memory was foolish? Well, we'll have to eat those words now because this card comes with 8Mb soldered on.

Of course, having more RAM is useful, so the single SIMM socket on the underside of the board will mean that you can have another 32Mb.

Another bonus is the fact that the board has a built-in SCSI controller, an NCR model which is pretty good quality. Also, the optional external port simply slides in from the back of your machine into that underused expansion port. This means that you don't even have to open up your machine and start dismantling in order to fit the card.

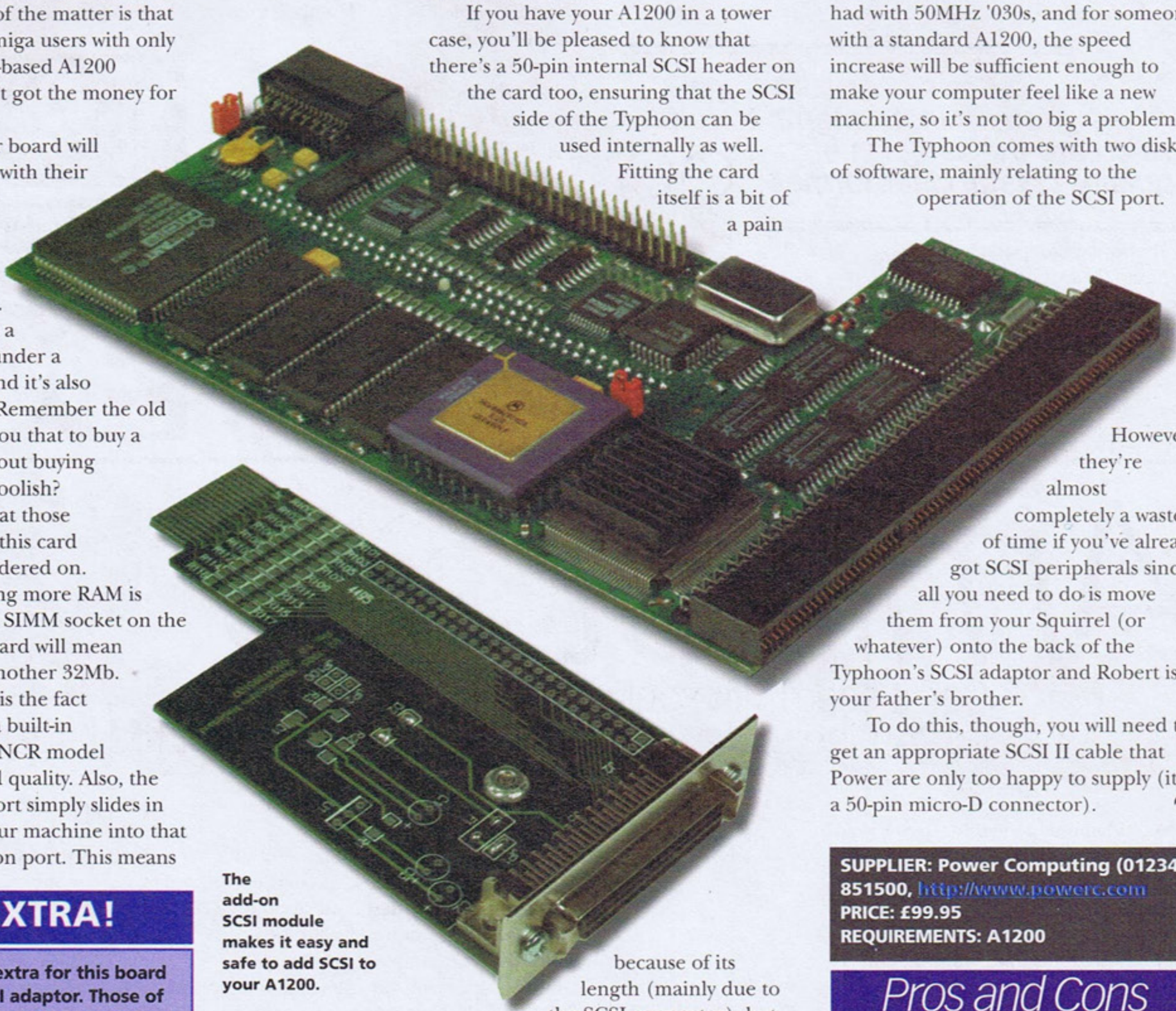
If you have your A1200 in a tower case, you'll be pleased to know that there's a 50-pin internal SCSI header on the card too, ensuring that the SCSI side of the Typhoon can be used internally as well.

Fitting the card itself is a bit of a pain because of its length (mainly due to the SCSI connector), but once it's in place it's a real plug 'n' play operation because the '030 doesn't need special libraries and the like to work, unlike '060s and PPC cards.

The one bad point is the fact that this card only has a 40MHz 68030, a bit of a come down from the top of the range 50MHz, offering only 80% of its speed. Power have stated that this is because of reliability problems they've had with 50MHz '030s, and for someone with a standard A1200, the speed increase will be sufficient enough to make your computer feel like a new machine, so it's not too big a problem.

The Typhoon comes with two disks of software, mainly relating to the operation of the SCSI port. However, they're almost completely a waste of time if you've already got SCSI peripherals since all you need to do is move them from your Squirrel (or whatever) onto the back of the Typhoon's SCSI adaptor and Robert is your father's brother.

To do this, though, you will need to get an appropriate SCSI II cable that Power are only too happy to supply (it's a 50-pin micro-D connector).



The add-on SCSI module makes it easy and safe to add SCSI to your A1200.

> "Another bonus is the fact that the board has a built-in SCSI controller, an NCR model which is pretty good quality."

EXTRA! EXTRA!

The best optional extra for this board is the external SCSI adaptor. Those of you with towered-up A1200s need not apply, but for those desktop-bound, this is a card that simply slides into the back of your machine where the expansion port is located (if you're looking at the back of the A1200 it's on the far left).

You don't need to open up your machine and pry up the floppy drive as you simply push it into place.

The other extra is the cable you'll need to drive your external peripherals. The reason for this is that the external SCSI add-on has a high density micro-D connector for SCSI II.

The SCSI add-on is £19.95 and the cable is between £15 and £20, depending on which one you need.

SUPPLIER: Power Computing (01234) 851500, http://www.powerc.com
PRICE: £99.95
REQUIREMENTS: A1200

Pros and Cons

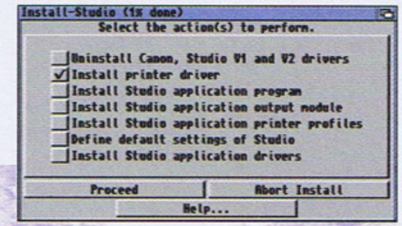
- + Very cheap.
- + Built-in SCSI for towers.
- + Built-in memory.
- − A very tight fit in the trapdoor.

OVERALL VERDICT:
Accelerators for the A1200 just get better all the time.

90%

Studio 2.2

Larry Hickmott helps you to enhance the quality of your printing with a review of ***Studio 2.2*** on CD.

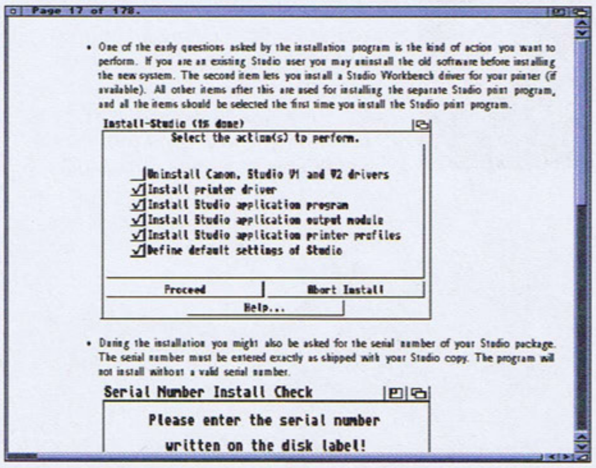


If you have multiple printers, you'll need to install the drivers one at a time.

Let's face it, Workbench and its printing system have stood still for many years now, while printers have become very advanced, enabling you to produce superb photo quality prints. To do this from an Amiga you'll need two things: one is a print enhancement program that supports these latest printers, and the other is a set of printing preferences that helps you get the best from your printer.

Studio 2 Professional is one such package, with the other being *TurboPrint 6* (reviewed in *AF109*). It was with great interest that I had a copy of the latest *Studio*, version 2.2, arrive on my desk in the form of a CD-ROM.

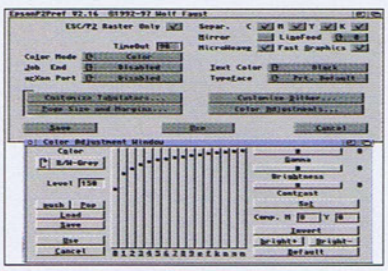
It contains the latest version of *Studio*, as well as things like a universal graphic import filter for *PageStream 3* and some high resolution "happy snaps" taken by *Studio* author Wolf Faust. It also comes with *AMICDFS2* and some Freeware, such as drivers and preferences software for Canon, Star, Panasonic and Seikosha printers.


Page 17 of 178.

- One of the early questions asked by the installation program is the kind of action you want to perform. If you are an existing Studio user you may uninstall the old software before installing the new system. The second item lets you install a Studio Workbench driver for your printer (if available). All other items after this are used for installing the separate Studio print program, and all the items should be selected the first time you install the Studio print program.

- During the installation you might also be asked for the serial number of your Studio package. The serial number must be entered exactly as shipped with your Studio copy. The program will not install without a valid serial number.

The manual for the program is now on CD and can be viewed on-screen or printed at the click of an icon.

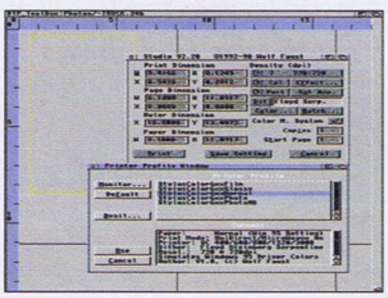


Controlling the colour adjustment of output from your Amiga with *Studio* is too technical for software these days. This needs to be simplified or at least have an option added for those who prefer things a bit more user-friendly.

INSTALLATION

When installing *Studio 2.2* I noticed I was unable to choose more than one printer emulation to install. Many Amiga owners have more than one printer, perhaps because of an upgrade from a Pin printer, DeskJet or Stylus, and to install drivers for multiple printers in the one operation would have been useful. However, you can go back later and choose to install just a printer driver.

The first thing I looked for after installation was Studio's support for the latest printers. This is always of great importance with new printers arriving on the market all the time, and the difficulty for Amiga owners is knowing which ones are actually supported on the Amiga.



This is the picture printing application that is called *Studio*. A preview of images would be useful but it's not essential. Profiles for certain types of printers, but not the Stylus Photo, are included to help you get the best quality quickly.

PRINTER SUPPORT

With *Studio* supporting hundreds of printers, it's impossible to list them all, but some of the popular printers include the Stylus Photo 700; Stylus 600; Stylus 1520; Canon BJC-620; BJC-4000; BJC-4100; BJC-4200; BJC-4300; BJC-4550; BJC-4650 and the Canon BJC-5500. Of the Hewlett-Packard printers, those supported include the DeskJet 690, DeskJet 850, DeskJet 855, DeskJet 870 and many of the latest LaserJets as well.

THE PACKAGE

The most important thing to understand about the *Studio* package is that it is made up of two types of software: preferences (DeskPrefs, CanonPrefs and so on) that you use to control the print quality from other applications, as well as a picture printing application called *Studio*.

This latter software is like the *Graphics Publisher* that comes with *TurboPrint*. As far as I can see, *Studio* doesn't allow for the printing of multiple images or the addition of text, both of which you can do in *TurboPrint*'s *Graphics Publisher*.

You don't get a preview of the image in the picture printing application either. That said, the quality of pictures printed from this utility is very good. Although it's perhaps not quite as intuitive to use as *TurboPrint*'s *Graphics Publisher*, *Studio* (the picture printing application) is still relatively simple to use.

A lot of your printing will be from applications like *Wordworth*, *Final Writer*, *PageStream* and so on. The output from these applications goes through the *Studio* preferences applications. For this to work, you have to use one of the *Studio* drivers that will be installed for your printer.

These preferences utilities are more powerful than those found in *TurboPrint*, but to get at that power, especially for the control of colour, you need to be quite technically minded. In light of this, thankfully, I've found for most uses that the defaults and presets available to you will suffice for most of the popular printers and applications.

MANUAL

The most significant change with the package is that the manual is now on CD. Unlike a number of other applications which use AmigaGuide or HTML for this, *Studio* has the printed pages on the CD. You can have them printed for you at the click of an icon or you can view the manual on-screen.

Finally, *Studio v2.2* also comes with output modules for two other applications, the *PageStream 3* and *ImageFX* packages. These applications only let you print in 24-bit.

DISTRIBUTOR: Weird Science (0116) 246 3800
PRICE: £29.95
REQUIREMENTS: Workbench 2, hard drive and extra memory recommended

Pros and Cons

- **+ Printing speed the same, but more data is being processed.**
- **+ Improves the print quality and supports the latest printers.**
- **- More technical to use than its main rival.**
- **- Poor quality on-screen online manual.**

OVERALL VERDICT:
Not much change. Superb quality output but quite technical to use.

89%

Reader Reviews: Canon BJC250

Paul Wood takes a look at Canon's full colour, budget, bubblejet printer.

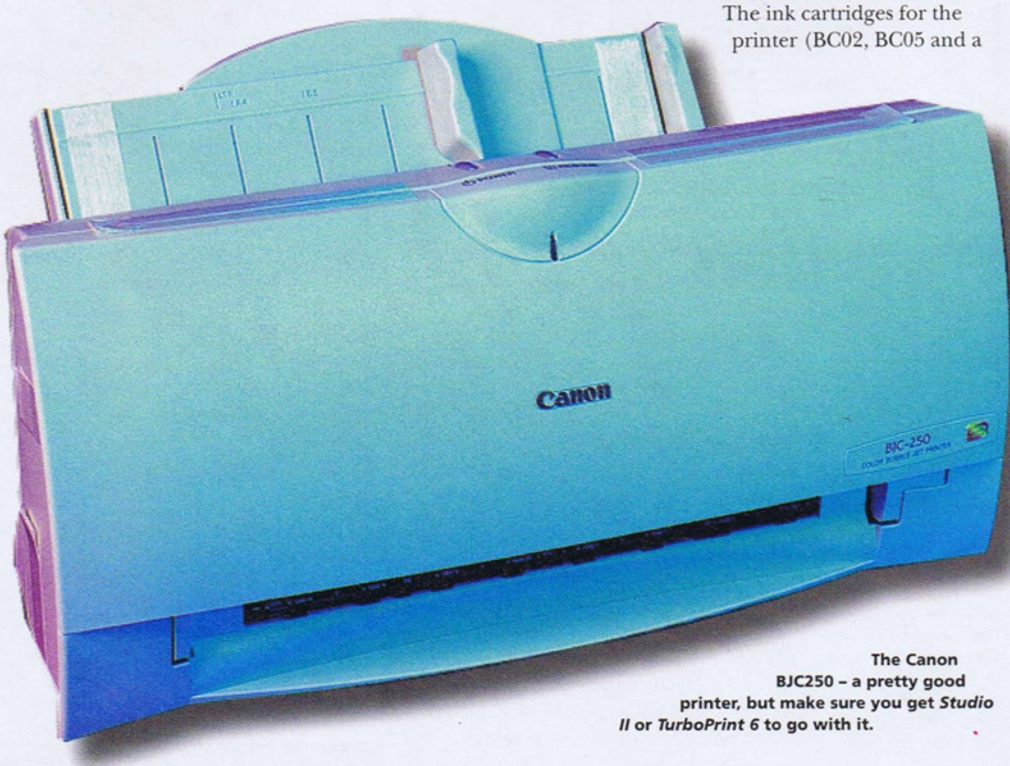
After going down to PC World (yak!) last November, I set my heart on purchasing the Canon BJC250 printer. I finally got it for Christmas and as soon as I'd torn off the wrapping paper, I hooked it up to my A1200 (10Mb RAM/68882 FPU, 85Mb HD), only to find that the only software that came with the printer was for Windows.



I read the manual carefully and found out that there were drivers available for DOS, so I gave those nice people at Canon a call and told them what the problem was. The lady on the other end of the phone was very polite, and I knew that she knew what she was talking about as soon as I heard her say "Do you have Workbench 2.05 or better?" She then sent me a copy of *Canondisk V3.98*, which had the drivers for all of the Canon BJ/BJC range.

As soon as the drivers arrived, I installed the driver for the BJC240 (a driver for the BJC250 was still in production for the Amiga), only to discover that the text and graphics output wasn't smooth at all, even with all of the smoothing options switched on. I managed to get it to print half smooth text, which was still a bit blocky, but apart from that it is a good printer.

The ink cartridges for the printer (BC02, BC05 and a special Photo cartridge) cost an arm and a leg (£20 for the black cartridge which comes with ink tank and a new print head, £30 for the colour and photo cartridges which come with cyan, magenta and yellow inks and a new print head). They only last for about a month if you're using the printer day in, day out, but there are cheaper "compatible" cartridges which can be purchased for almost half the price of the Canon cartridges.



The Canon BJC250 – a pretty good printer, but make sure you get *Studio II* or *TurboPrint 6* to go with it.

> *I hooked it up to my A1200, only to find that the only software that came with the printer was for Windoze.*

I haven't tried this printer with any of the special drivers that are on the market, such as *TurboPrint 6* (*AF109*, 95%), and so I'm stuck with the Workbench drivers. But hey, Workbench is still considerably better than using a Windoze screen, and some of the Workbench printer drivers are much better than some of those nasty PC printer drivers that I've seen.

Although the printer has a photo option, I haven't actually got round to paying the extra £30 for the photo kit itself yet – standard colour is alright for me at the moment. However, I've been told by other local Amiga users that it is excellent, especially when you purchase special driver programs such as *TurboPrint 6* to go with the photo kit.

As this printer is the first inkjet printer I've ever owned, I found it a good bargain at £130 when I bought it, but now it will only set you back £100 if you decide to buy it.

Be warned though, if you don't have the right software then printing will take forever. On the other hand, if you do have the correct software, and a fast processor (68020 and above), this small printer will carry on knocking out printed pages at about 2ppm mono and .25ppm in colour until your ink cartridge has run out.

YOUR REVIEWS

Have you got any software or hardware you couldn't live without? Got any that you'd happily chuck in the bin? Write a fair and accurate review of about 750 words and you could see your work appear in *AF*!

We will also need some good photographs of any hardware you review and a passport photo of you. Send your reviews to: *Amiga Format* • Reader Reviews • 30 Monmouth Street • Bath • Somerset • BA1 2BW.

DISTRIBUTORS: Canon UK
PRICE: Varies

OVERALL VERDICT:
A nifty and stylish little printer, let down by the price of ink cartridges and the fact that the manual assumes you own a PC.

80%

BEN'S VERDICT

Any modern printer is going to be let down by the Amiga's outdated printing system and the only way to get the best out of it is to either use *Studio II* or *TurboPrint 6*. There is no other alternative, so figuring out the cost of a printer has to include getting one of these packages, as well as the inks and paper you're going to need. They're both easily available from Amiga dealers so you have no excuse!

ShopWatch



The best places around the world to buy Amiga hardware and software.

Our ShopWatch section is growing every month. Wherever you live, you can be sure that there'll be an Amiga store near to you, and this is the best place to find out where.

We rely on you to provide us with up to date information, so please keep telling us about your local shop. We'll even occasionally pick one of your contributions at random and send you a mixed bag of great Amiga goodies, so send your entries in now!

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Comfix Computer Maintenance, 111 Cambridge Street, West Leederville, WA, 6007.
☎ 08 9388 1665.
Provides Amiga software and hardware support.

Unitech Electronics, 8b Tummul Place, St. Andrews, Sydney, NSW.
☎ 02 9820 3555.
All hardware and software and also make own cables. Very professional and helpful.

G. Soft Pty Ltd, Shop 4 / 2 Anderson Walk, Smithfield, South Australia, 5114. Also at 33 Adelaide Road, Gawler, South Australia, 5118.
☎ 08 8284 1266, email gsoft@cobweb.com.au
New and used hardware and software, repairs, tech support and advice.
Family run, helpful, will custom-make tower systems and will give any hardware a custom colour scheme of your choice.

Computer Magic, 44 Pascoe Vale Road, Moonee Ponds, Victoria.
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Desktop Utilities, Shop 13, Manuka Court, Manuka, Canberra. ACT.
☎ 02 6239 6658.

MVB Computer Supplies, 506 Dorset Road, Croydon, Victoria.
☎ 03 9725 6255.

Synapse Computers, 190 Riding Road, Hawthorne, Queensland.
☎ 07 3899 0980.

AUSTRIA +43

M.A.R. EDV Systeme, Karlsplatz 1, A-1010 Wien.
☎ 1505 7444. Sells hardware and software and offers an Amiga repair service.

BELGIUM +32

Amiga Service, Rue Du Nord, 93, 6180 Courcelles. ☎ 71 458244.
PD disks, CD-ROMs, software, hardware and services like scanning, hard drive recovery and laser printing.

AFI (Applications & Formations Informatiques), Clos Del 'Me 21, 4431 Loncin (Liege).
☎ 4239 0093.
Can provide help on most serious subjects. Full Amiga range with a good selection of second hand hardware. Aminet CDs are available, as well as the most common applications.

Click!, Boomsesteen Weg 468, B-2610, Wilrijk.
☎ 3828 1815.

Generation Amiga, Rue de l' Eglise, 22, 1060 Brussels. ☎ 2538 9360.

Amiga City, Avenue du Prince, Heritier, 176, 1200 Brussels.
☎ 2736 6111.

Digital Precision, Chaussee de Jette, 330, 1090 Brussels.
☎ 2426 0504.

DENMARK +45

Betafon ApS, Gylden Lovesgade 2, 1369 Kobenhan K. ☎ 3314 1233. Email info@betafon.dk or visit http://www.betafon.dk
Sells hardware and software and has been an Amiga dealer since 1980.

Kiwi Multemedia, Lerager 60, 3600 Frederiksund. ☎ 4738 0639.
Stocks almost all Amiga products, makes the Millennium Amiga.

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AIC Systems, ☎ 09 8775 1100, email vmp@dlc.fi

Amigator, ☎ 02 234 5333, email aho@sip.fi

Broadline Oy, ☎ 09 8747 900, email broline@dlc.fi

Broadware Oy, ☎ 09 7001 8580, visit http://iwn.fi/broad.html
Sells a good range of accelerators and other items of hardware.

Gentle Eye Ky, ☎ 03 363 0048, email ge@vip.fi
The staff are very skilled and the shop stocks most new products.

Harcom Oy, ☎ 09 409 373, visit http://personal.eunet.fi/pp/har

Håt Data Huolto Oy, ☎ 09 769 314.
Offers a repair service.

Karelia Computer Ky, ☎ 013 897 088.
Most older hardware and software.

Tsunami Trading, ☎ 02 438 9870, email tsunami@dlc.fi

Video Spotronics Ky, ☎ 09 8735 435.
Offers a repair service.

GERMANY +49

ADX Datentechnik, Haldesdorfer Str. 119, 22179 Hamburg.
☎ 040 642 02656. Hardware and software reseller.

Softwarevertrieb Kanzmeier, Senator-Balcke-Str. 85, 28279 Bremen. ☎/fax 04 218 31682, email 01461.2277@compuserve.com

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Computer City, Zebrastraat 7-9, NL 3064 LR, Rotterdam.

☎ 31 10 4517722, email info@compcity.nl
Sells most Amiga products and helpful staff.

Courbois Software, Fazantlaan 61-63, 6641 XW, Beuningen. ☎ 024 6772546. All hardware and software, with many second-hand products at very low prices.

Amigis, Spanjaardstraat 53, 4331 Ep, Middelburg. ☎ 0110 625632, email info@amigin.nl
Amiga hardware and software.

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Comp Karori, Karori Shopping Mall, Karori, Wellington. ☎ 0447 69088, email gchiu@compkarori.nz or visit http://www.compkarori.co.nz
Sells most Amiga products.

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Audiovisual, Rua Maria Matos, 6 – C/V Dta, 2675 Ramada, Portugal. ☎ 351 1943264, email info@audiovisual.net
Dealer/distributor, promises best prices for hardware and software.

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AmigaLine, Moscow, Zorge 6.
☎ 943 3941 or 943 3871, email ambartsumian@glas.apc.org
An Amiga-oriented computer shop located in Moscow.

Amiga Service, Office 309, Bumazhnaya Str 3, Sankt-Peterburg, 198020.
☎ 812 1868842.
A1200 hardware.

SPAIN +34

Club Byte, C/D. Juan de Mena, 21 bajo Izq, 46008 Valencia.
☎/fax (96) 3921567.

SWITZERLAND +41

Applimatic SA, Rte-de-Montreux 49, CH-1618 Châtel-St-Denis, Switzerland.
☎ 41 21 931431.

Digitronic, Chr Merian – Ring 7, 4153 Reinach.
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Full range of Amigas.

Amiga Shop 2000, Wallisellenstr.318, CH-8050, Zurich. ☎ 411 3221414.
Hardware, software and skilled staff.

Amigaland, Butzenstr.1, CH-8038, Zurich. ☎ 411 482 4750. http://www.amigaland.ch
Sells a full range of Amigas (please note that the shop is closed on Tuesdays).

UK +44

Cavendish Computers, 144 Charles Street, Leicester. ☎ 0116 2510066. Hardware (old), games and utilities.

Classic, 11 Deansgate, Radcliffe, Manchester, ☎ 0161 7231638.
PD, commercial games, CD^{32}, CD-ROMs, hard drives, CD-ROM drives, A1200s, floppy drives, disks, modems. Free fitting service on hard drives.

Level 7, 113 Victoria Road West, Cleveleys.
☎ 01253 859004.

Electronics Boutique, Unit 19, St. John's Centre, Perth, PH1 5UX, Scotland.
☎ 01738 637807. Software and peripherals and will order any Amiga games you require.

Mays, 57 Church Gate, Leicester city centre.
☎ 0116 2516789. Hardware, games and utilities.

Computer Solutions, Unit 2, Mill Lane Mews, Ashby-de-la-Zouch, Leicestershire, LE65 1HP.
☎ 01530 412983. New and used software, hardware, stocks full range. Helpful staff.

Tech-Exchange, 3 Forest Road East, Nottingham, NG1 4HJ. ☎ 0115 9100077. All Amiga products and a helpful and knowledgeable staff.

Computer Cavern (Capri CD Distribution), 9 Dean Street, Marlow, Bucks, SL7 3AA.

Chips, 8 Watchbell Lane, Newport, Isle of Wight.
☎ 01983 821983. Lots of classic games and older Amiga hardware.

Electronics Boutique, Gallowtree Gate, Leicester city centre.
Stocks games, although it tends to be a bit slow on new games.

Vortex Services, 13-15 St. Michael's Square, Ashton Under Lyne, Lancs, OL6 6LF.

Allsorts, 51 Park Road, Wosbrough Bridge, Barnsley. ☎ 0589 272940. Games, PD, disk drives, monitors (all used).

Planet Games, 3 Royal Oak Buildings, Waterloo Road, Blackpool.
☎ 01253 348738.
Amiga software.

Game, Sheffield Town Centre.
☎ 0114 2729300.
Sells various Amiga games and utility disks, and it's also possible for customers to reserve games in advance.

Swops, Corner of Bold Street, Fleetwood.
☎ 01253 776977.

Electronics Boutique, 30 The Mall, Golden Square, Warrington, Cheshire.
☎ 01925 240731. A good selection of Amiga software and peripherals.

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Workbench

AF's resident hardware healer and software saviour, **John Kennedy**, solves your problems yet again. Write to: **Workbench • Amiga Format • 30 Monmouth Street • Bath • Somerset • BA1 2BW.**

AMSTRAD ACTION

I seem to have a few problems connecting a new 32x CD-ROM to my system. It came with a PCMCIA cable to attach to my PCMCIA slot, which I did, but it didn't work. I installed it 20 times and it still didn't work. I returned it to my dealer and when I got it back and tried it again, it still didn't work.

Out of desperation I thought about the problem and tried putting the original Workbench 3.0 chips back in, and guess what? It worked.

I checked everything out and found out that on the Workbench 3.0 boot startup screen there is a CC0 carddisk driver and on the Workbench 3.1 version there is no such thing. Could you please tell me:

1 Is there another way of using an external 32x CD-ROM drive without the PCMCIA slot?

2 Is it possible to transfer Amstrad CPC464 cassette games onto disk using a magtape?

3 Can you tell me what a magtape is and whether it can be connected to the Amiga?

4 What is an emulator and would it be possible to use the 464 cassette games transferred onto disk with an Amstrad emulator on my A1200?

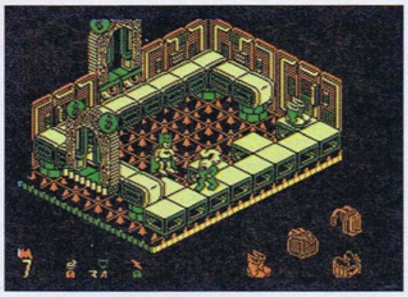
Raffi Khan, Birmingham

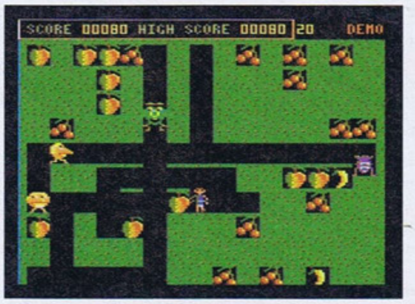
1 If you have an 8Mb memory expansion, that could be to blame – try removing it. If your system works, you can be sure that the second 4Mb chunk of memory is clashing with the PCMCIA port. To get around this, you either need a new memory cared or a new CD-ROM interface. Exactly what sort of interface depends on whether your CD-ROM drive is SCSI or ATAPI/IDE.

In essence, you need an interface which connects your Amiga to your CD-ROM drive, and if your CD-ROM drive is SCSI, you need a SCSI interface. If your CD-ROM drive is ATAPI/IDE, you need an IDE interface.

The Amiga has an IDE interface built-in, and although primarily designed for use with hard drives, it can also be used with CD-ROM drives, as long as suitable CD-ROM Filing System software is used. An IDE buffer card is also a good idea.

If you need a SCSI interface, it's possible to buy interfaces which connect internally.





You can get Amstrad emulators (and probably the games too) from these sites:
http://andercheran.aiind.upv.es/~amstrad
ftp.ibp.fr/pub/amstrad
ftp.nvg.unit.no/pub/cpc

2 I'm not sure, to be honest. I know there are instructions on using an audio sampler to do just that for a ZX81/Spectrum, but I'm not sure it that includes support for the Amstrad CPC. It's worth asking in the appropriate Usenet groups.

3 Oh dear, I thought you knew what magtape was. I was assuming you meant the cassette tape used to store programs in the olden days when disk drives were prohibitively expensive.

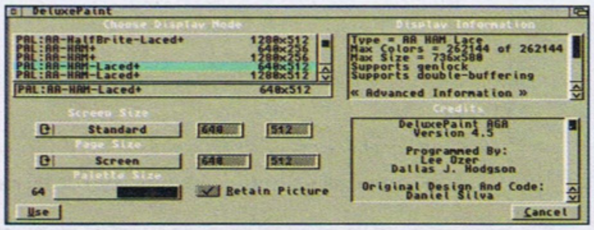
Back in the 1980s, old codgers like me used to use old audio cassette tapes to store programs for our Spectrums, BBC Model Bs and Amstrad CPC464s. In fact, the CPC had a cassette deck built in.

4 An emulator is a program which causes the system it is run on to "pretend" to be another computer. So, an Amiga running an Amstrad CPC emulator would act like a real Amstrad CPC. Yes, that means it would run any software you managed to install on it.

GRAPHICS GRIEF

1 If I load a HAM8 picture when using *DPaint IV*, the toolbar and menu bar go completely black. Sometimes the requestors cut a piece out of the picture as they disappear, especially when freeing a brush.

You need *Deluxe Paint 4.5 or 4 AGA* if you want to be able to use it properly on an AGA machine.



The cursor is also very sluggish going down the menu items, with or without the RAM board and external FDD connected. As I have a fair amount of fast RAM, I presume this could be a shortage of chip RAM.

2 As I do a lot of video work, I prefer to use overscan and interlaced modes (one of the reasons for choosing the Amiga) but this makes it difficult to use the requestors. Is a proper monitor the only answer?

3 The manual, and articles I've read in your magazine, boldly state that it is possible to use PC files utilising *CrossDOS*, but details on exactly how you do this are sketchy to say the least.

I know you have to use MS-DOS formatted 72Kb disks and I have managed to import an Amiga bitmap onto a PC, but only after converting it to BMP in *Image Studio*. However, even then it was squashed.

I've tried importing PC bitmaps, clipart and fonts but my Amiga refuses to recognise them. I've even tried importing bitmaps into *Image Studio* and *Photogenics*, which are supposed to automatically recognise FileTypes, but it simply says "unknown FileType".

I've converted TrueType PC fonts to Amiga Outline fonts using *TypeSmith* and I've successfully loaded them into my fonts directory using *Intellifont*. However, when I try to actually use them in an application, they aren't recognised. What am I doing wrong?

F. J. Hudson, Derby



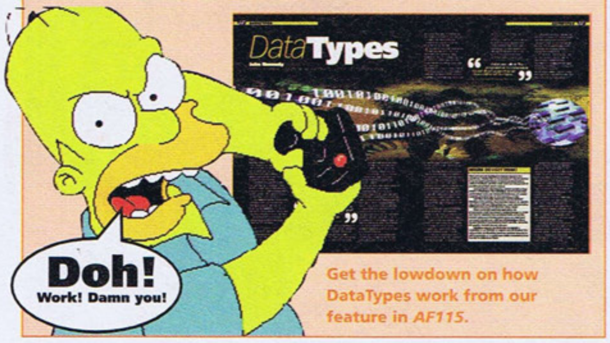
DUFF DATATYPE

I recently tried installing the program *Homer* on my Amiga but it refuses to load because of an image error. The doc file tells me that I need a GIF DataType.

I know that I need to put a suitable DataType in the devs/datatypes drawer on my system partition, but where do I find this DataType? I haven't got one. Help!

Mark Weldon, Wigston

GIF Datatypes are a thorny problem. The essence of it is that anyone creating one has to pay a license fee to Unisys – the owners of the algorithm that they rely on. Unfortunately this tends to mean that GIF datatypes aren't freely available. Try the PPaint 7.1 CD – it may be on there.



Get the lowdown on how DataTypes work from our feature in *AF115*.

1 I'm afraid that either Dpaint IV *isn't totally HAM8 compatible, or as you suggest, your system is running out of chip RAM. HAM8 mode places a tremendous strain on the Amiga and really pushes the custom chips to their limits. A processor board would certainly speed up the entire Amiga, which would be a start, but you might find that using 256-colour mode with dithering achieves similar results with less effort, at least on the behalf of the Amiga.*

Also, ensure that all other resources which are likely to consume chip memory are minimised. Don't use a recoverable RAM disk, and make sure you either switch off the Workbench screen or keep its size and colour depth to a minimum.

2 A proper monitor, whatever that is, is unlikely to help you. The entire point of Overscan is that the display goes right to the edge of the screen and beyond so that there's no border. With a monitor, and even with a TV, you should find it possible to adjust the horizontal and vertical size and positioning to see your requestors.

3 As you have discovered, accessing a PC format floppy disk (more accurately, an MS-DOS format disk) and making use of the data on it are two very different things indeed. In fact, allowing the Amiga to read from and write to an MS-DOS disk is as far as CrossDOS *can go. After that, it's up to you to sort your data out, and this means taking into account the different file formats and screen resolutions.*

This isn't a trivial task, as you are finding out. Rather than using the PC BMP bitmap format, try using GIF and JPEG as you'll probably find fewer problems.

BMP has several variants, which is why your experiments so far may have failed. Fonts are a source of much grief too, as there are plenty of standards but also plenty of ways of interpreting them.

FASTER, FASTER!

I have a SCSI 2x CD-ROM from HiSoft. It's pretty slow and I would like to know if I can upgrade it by replacing the CD-ROM unit which is housed in its own external PSU bay. I'd like to get a 4x unit like the internal SCSI CD-ROM sold by Power Computing, or an alternative drive from HiSoft.

Ross Whiteford, Perth

As long as the new drive you buy is SCSI compatible, rather than an ATAPI/IDE mechanism, you won't have any problems at all. Simply remove the existing drive and replace it with the new one, checking the jumpers for SCSI ID and termination settings.

As SCSI drives tend to be more expensive than their IDE counterparts, and as you will be unlikely to find a new SCSI CD-ROM drive less than 20x, you might want to consider scouring our free Reader Ads pages for a suitable replacement.



You might find a faster SCSI CD-ROM drive in our Reader Ads section.

MEMORY SHORTAGE

With regard to *Personal Paint 7.1*, I have been told that *Wordworth* fonts will work with the Circle and Whirlpool text ARexx in *PPaint 7*.

However, when I try to use the Circle or Whirlpool text, all I get is a pop up message "Not enough memory". I have the 2Mb of my A1200, plus 8Mb in the trapdoor. What on earth is happening?

A. Sheldon, Nottingham



If *PPaint* says you don't have enough memory then it's probably talking about chip RAM, not fast RAM.

Manipulating fonts seems to require chip memory and it is this memory which could be running out. Try using a two-colour, Low Res screen to create your circular fonts as this will use up the least possible amount of chip RAM.

If that makes no difference, it could just be an incompatibility with the fonts and the program, causing the program to fail with the pseudo-random error about memory.

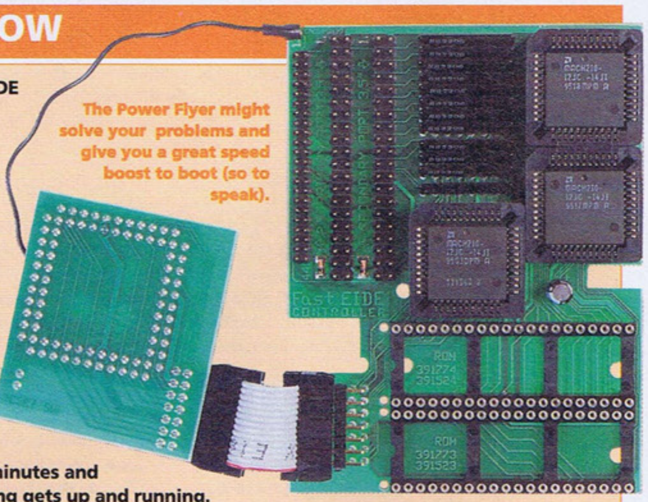
HARD DRIVE GO SLOW

I recently purchased a Quantum 2.1Gb IDE Ultra DMA hard drive from Power Computing that is difficult to start up. Having fitted it according to the instructions, it takes anything from up to five minutes before it actually gets going.

When I switch on from cold, the HD makes all the noises as though it was loading, then, some time later, I'm presented with the reset screen. After pressing reset, it attempts to load but doesn't. If I then insert a *SID* (or *DOpus*) disk and fire that up, it tells me there is no hard drive available (no path found). If I then insert and play a game for a few minutes and then reset, the HD kicks in and everything gets up and running.

Once this happens, it works brilliantly and I have no complaints whatsoever – it's just the long delay in getting there. I was told that maybe I need a better power source, which I tried with no improvement. It was then suggested that I remove the 8Mb card from the trapdoor, but again there was no difference. It's almost as if something has to warm up first before it will work. Power just said I had a power problem and left it at that, but once I get over the initial wait, it works so well it can't possibly be that. Any Ideas?

R. L. Nettleton, Glemsford



The Power Flyer might solve your problems and give you a great speed boost to boot (so to speak).

If you've tried a more powerful PSU then we can rule out power. Some hard drives are more equal than others, and a common problem is the refusal to boot from cold. On IBM hard drives, breaking the Pin 1 connection in the IDE cable sometimes solves the problem. Some Conner drives have jumpers which force the drive to work in slightly different ways: experimenting with CAM/ISA settings sometimes makes all the difference. Finally, the good old MaxTransfer setting has been known to work wonders. All these things could be to blame, but I'm surprised Power didn't try to sell you their Flyer interface as that could also solve the problem. At the very least, it would make sure you're using the speed of your new drive to the best of its abilities. At the end of the day, some hard drives just don't seem to like booting from cold.

Continued overleaf ➡

EIGHT MEG MYSTERY

I have an Amiga 1200 with two external drives (one with its own power supply), a Sanyo 2x 250S connected by a Squirrel (which incidentally runs *AFCD25* with no problems), a 200Mb HD, Commodore 1084s monitor, Star LC24 200-colour printer and an 8Mb RAM upgrade. All this is powered by a modified PC power supply.

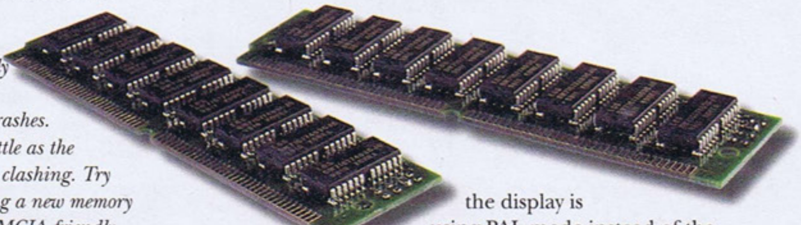
My problem is that since changing from 4Mb to 8Mb fast RAM, I find I can no longer use backdrop pictures as the machine crashes as soon as I test, use or save them. Some Guru numbers I've noted are 8000 0006, 8000 0004, 8000 0003. Also, some games crash on loading from hard drive or disk, one of which is *UFO*. If I use NoFastMem then the problem is cured.

My friend also has this problem and we were wondering if there is a cure or fix of some kind. The machines do not seem to suffer in any other way so we can live with the problem.

J. Wicks, Dagenham

I would guess that the answer lies in the 8Mb expansion. Either the memory is faulty or the second bank of 4Mb clashes with the PCMCIA port. Why would this happen only with a backdrop? It could be that with a large backdrop, another application is forced into the fast memory, eventually reaching the second 4Mb bank which clashes and crashes.

NoFastMem proves little as the memory could be faulty or clashing. Try swapping SIMMs or trying a new memory card which is certified PCMCIA friendly.



Are SIMMs really the root of all evil?

MARK OF ZORRO

My problem is with my network board. When I turn the computer on, Workbench 3.0 loads up as normal but the display is using PAL mode instead of the Picasso modes. I used *sysinfo3.15* to check the autoconfig boards, but it can't detect the graphics or network boards. This problem only occurs when I've turned the computer off for a while. To get around it, all I have to do is reset my Amiga.

Could you tell me if there is any way of getting the boards to function on the first boot up of Workbench instead of having to reset every time? Besides this problem, everything else seems to be fine. I'm just waiting for clickBOOM to release the PPC version of *Quake* now…

Simon Hawley

In older PC systems, swapping the order of the expansion boards made all the difference

Workbench

10 things to do when:

You want to get down to serious work.

1 Use a 24-bit paint program to create a new logo for your local cable TV company, and then use *Scala* to create a flashy animation to send to them on video tape.

2 With a DTP program, design your own local newsletter, distribute it in your neighbourhood and get sponsorship from a local firm to pay for the costs.

3 Use a CD-R drive to record local bands and make demo discs.

4 Remember to design their album covers as well!

5 Learn C and C++ programming using the Amiga and get a job as a programmer.

6 Approach a local business and explain to them how you can put them onto the Internet, using your Amiga to design their world wide web pages.

7 Use a MIDI sequencer and audio hardware to record a top dance tune.

8 Use your favourite word processor to write interesting articles about the Amiga and then send them to us.

9 Create a show reel of spectacular 3D rendering done with *Imagine*, *Lightwave* or *Cinema 4D* and send it to the big game companies to get a top job in graphics.

10 Install a *Unix* clone on your Amiga and then learn everything there is to know about web servers, *Perl* and TCP/IP. Then you can get yourself a top job running an Internet site.

BLAST FROM THE PAST

I have an A500 (please don't laugh), 0.5Mb chip, 1.5Mb internal RAM (gary conversion), A590 20Mb hard drive and 2Mb RAM, Workbench 2 and a Panasonic KX-P1081.

I've had the old girl for approximately 10 years and I have some problems. Firstly, software. Some programs say they need Workbench 2+, for example *Poing 6* (disk 112b). First of all I tried to install it on my hard drive and assigned the hi-score directory as instructed. It loaded fine and displayed *Poing 6*, but when I tried to start it by pressing "s" it locked up. After resetting, it showed me the infamous Guru meditation with "80000003 Dead end".

I thought it must be the way I'd installed it, so I then read that you could play it straight from the disk. I reset it and booted it up with exactly the same problem. *Assimilation* on disk 104b was the same. Is this because I've only got 0.5Mb chip RAM?

Now for hardware. Is there any way I could fit a larger drive than 20Mb as it is so easy to fill my hard drive up, even after going through it with *DOpus* and putting non-essential software onto the floppies? Using *Sysinfo*, it says my drive uses XT.Device, if that's any help. I asked at my local Amiga shop (in Barking, Essex) and the guy there said that I could have a SCSI drive or an IDE and that I would have to open it up to have a look. How can I tell what is what?

I explained that I still have the original A590 prep disks but he said that they were only designed to prep 20Mb only.

At the back of my drive there is a connector. What's that for? Can I connect an external SCSI piece of hardware, like a Zip drive, another hard drive or even a CD-ROM? If so, can you tell me what to do?

Printer problems. I have trouble printing graphics on my printer (yes, I know it's ancient). I have the Panasonic 8-pin driver and "pana prefs" programs, but I still get complete garbage when printing and I'm getting fed up.

Also, my iron has stopped ironing properly.

Matthew Neaves, Ilford

I reckon your software failures are down to the fact your A500 is still only packing a 68000 processor. The errors you see often happen when software compiled for 32-bit processors (and those with FPUs) is executed on a 16-bit processor. In the old days, 68020 and '030 cards for the A500 were very popular, so keep an eye open at car boot sales.

When it comes to the A590, my mind is a little hazy; it was a long time ago when I last used one. I seem to remember that it didn't use a SCSI hard drive, but an older drive format which probably isn't made any more. However, the port at the back is a SCSI-1 interface which means that yes, if you got a SCSI hard drive, stuck it in a box with a PSU and connected it up, it should work fine. And that should go for a Zip drive too, although I'd like to hear from someone who has got it working first.

Throw the printer away and buy a new one. Oops, can't say that. If I did then I would also say throw the A500 away and get a second-hand A1200. Check the cable: it could be worn out and causing rubbish to arrive at the printer. Then try the simplest possible printer driver (Epson) and DIP settings on the printer and work from there.

Sorry, I have no idea what an iron is. You would have to ask my wife!

as when the computer powered up, it would configure each in turn. I'm not quite sure how the Amiga knows which card to talk to first, but it must be worth a try. As you have an A1200 and Zorro card adaptor, it would appear that this is a feature of the Zorro expansion system you are using.

Short of complaining to whoever you bought it from, you could also write a program which looks for the cards and resets if it doesn't find them. Adding it to your user-startup would ensure your system always booted ready for action.

ROOM FOR EXPANSION

I've been with the Amiga platform for four years, but up until very recently I used my unexpanded A1200 solely for games software. However, I have colossal amounts of coverdisks which aren't compatible with my ageing system and I really want to use them, and so I've decided that the only option is to (gasp!) upgrade.

I have a very tight budget, but could stretch to about £350 if I'm very lucky. I know I need a hard disk, a CD-ROM, an accelerator and preferably a tower for any other expansions, but which should I get? The Ateo tower seems cheap at only one hundred and thirty pounds, but I would appreciate some expert advice on how to expand.

Please print this as I've just switched from *CU Amiga*, due to the extended games coverage in your magazine and the fact that you lot talk English, rather than "hardcore-techno-freak-crap".

And isn't it a bit strange that Mr. Kennedy works for both EMAP and Future Publishing?

Zzz, Somewhere Out There

A good accelerator will cost you between £50 and £150 (that's for an '030- to '040-based card), a standalone CD-ROM another £100 and a cased hard drive another £100.

You're correct in that if you splash out on a tower, you can generally save money by using standard PC CD and hard drive components. £150 spent on a tower means you can fit a hard drive and a CD-ROM for another £100.

It's all confusing and it really depends on if you want your Amiga in a new box or if you want to keep it in its original casing. The tower approach will provide you with a neater, all-in-one solution so check back through AF *for the reviews. In the meantime, start with the accelerator and 8Mb of memory and you'll have what seems like a brand new computer.*

I can assure you that Mr. Kennedy no longer works for EMAP. In fact, there are a lot of Mr. Kennedys about. There's another one at PC Format, *for example.*

THE ANSWER IS YES

I have an A1200 with no hard drive or CD drive, no extra RAM and no faster processor. I'm thinking of buying a hard drive and a CD drive so I can buy the CD version of your magazine.

What CD drive and hard drive should I buy? Do you need a hard drive to use the CD drive? Can you use an internal hard drive if you don't have a tower? If that is possible, will there still be enough room for a faster CPU and extra RAM?

I bought the computer from a friend but he's lost all his manuals so I don't know much about how to use HDs or CD drives. I've been writing games and programs in *Blitz Basic 2* for about a year now. Can I send my games to Reader Games if I don't have a CD drive or do I have to send a Reader Warrant file from the CD too? What's the best way of writing *Assembler* programs for the Amiga? Where can I learn how to write games in *Assembler* and how to program the 680x0 processors? Do you know about any books? If someone writes a good game, can you put a demo of it on your coverdisks?

Thomas Jonsson, Sweden

You don't need a hard drive in order to use a CD-ROM drive. Yes, you can fit an internal hard drive into standard A1200 casing, and yes, this will still leave space for an accelerator and memory. As for which drives to buy, well, that's why we have reviews in the magazine, so read a few back issues. Yes, you can send your game in to us if you don't have a CD-ROM drive.

The best way to write assembly language programs is to buy an assembler (say, DevPac 3 *from HiSoft) and the* Hardware Reference Manual. *Writing games is something else: there is no definitive book, but you could find a lot of information on the web and by asking on Usenet.*

When it comes to demos, we're always looking for good programs to put on the coverdisc. An inch makes all the difference. AF

You want a tower? You want a big tower? Do you sir? Do you really?



HARD LUCK

I've just finished reading July's *Amiga Format* and have looked through the information on hard drives on *AFCD28*. Some of this information describes how to attach two 3.5" hard drives to the IDE interface of an A1200.

I'm thinking about putting my A1200 into a tower case as my 2.5" hard drive can only store 520Mb of data and a 3.5" hard drive doesn't fit into a standard A1200 very easily. Is there any way in which I can use a 3.5" hard drive and still be able to use my old 2.5" hard drive as I don't really want to throw the old one away?

S. Smith Bognor Regis

You cannot link a 2.5" drive and a 3.5" drive together in the usual master/slave relationship. Most 2.5" drives are designed to be the only drive in a notebook computer, and therefore don't have the necessary jumpers.

However, you can buy an IDE buffer board which effectively gives two separate master/slave channels, so you could use the existing 2.5" drive on one and the new 3.5" drive on the other, with a CD-ROM drive too if you wanted.

IF YOU HAVE A QUERY...

At *Amiga Format* we aim to answer as many questions as possible. Unlike some magazines, we don't just concentrate on our areas of expertise – we take on all your problems (as long as an Amiga is involved). Here are a few tips on sending in questions:


John Kennedy.

- Be concise.
- Detail the problem as best as you can.
- Describe the events that caused the problem.
- Give full details of your equipment.
- Make sure your question is relevant and wouldn't be more easily solved by contacting the dealer from whom you bought the goods.

Bear these points in mind and fill in, photocopy, or copy the form below as best you can. Unfortunately we cannot reply personally.

Send your letters to Workbench, *Amiga Format*, 30 Monmouth Street, Bath, Avon BA1 2BW.

Your Amiga:

○ A500 ○ A500 Plus ○ A600
○ A1000 ○ A1200 ○ A1500
○ A2000 ○ A3000 ○ A4000

Kickstart version

○ 1.2 ○ 1.3 ○ 2.x ○ 3.x

Hard Disk: .... **Mb**

Manufacturer: ....

Extra RAM fitted – type, size, (Mb) and manufacturer:

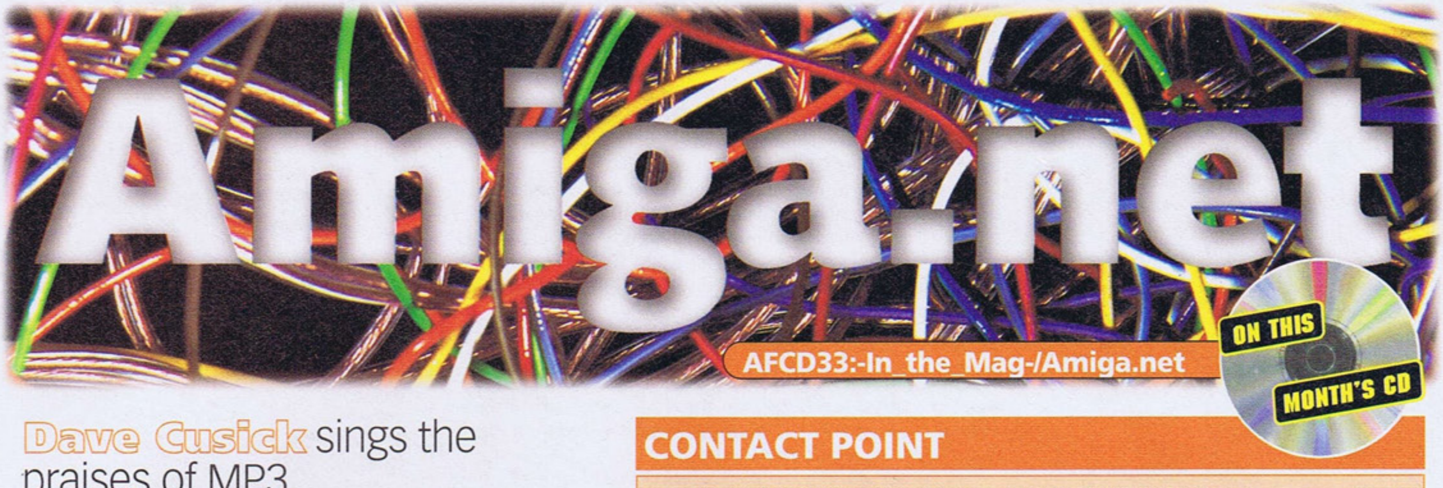
....

....

Details of other hardware:

....

Amiga.net



Dave Cusick sings the praises of MP3.

CONTACT POINT

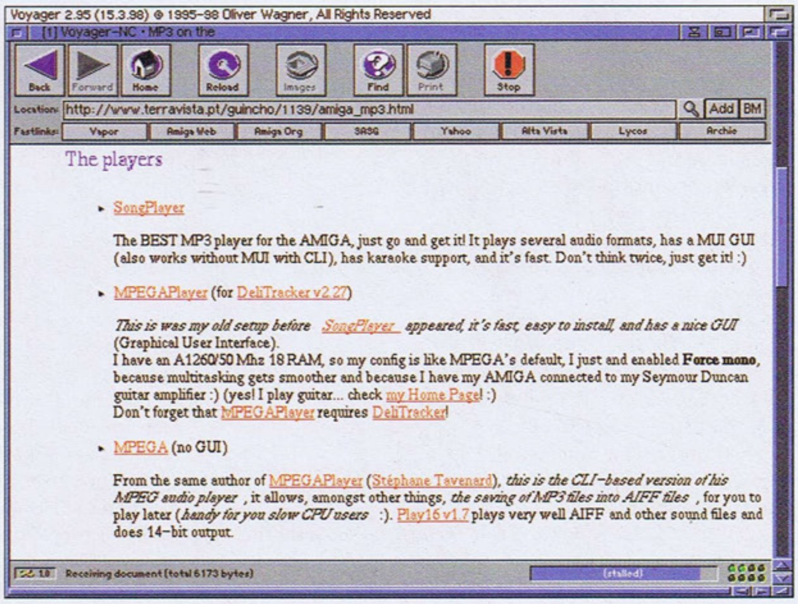
I can be reached with comments, suggestions and feedback at dave@dcus.demon.co.uk, or via my website at http://www.dcus.demon.co.uk/.

At long last, the appalling buzzword "multimedia" seems to have been condemned to the great marketing office in the sky. It seems that the world has finally woken up to the vagueness of this ghastly piece of nineties terminology.

> A typical four-minute pop song can be encoded into an MP3 file that is barely 4Mb in size, and decoded on the fly...

Multimedia, which simply means "more than one media", has been used to describe everything under the sun over the last few years. Its most common use has been to describe home computers capable of presenting text, graphics and sound at the same time – something the Amiga has been able to do very effectively since the days when 286 PCs were just catching on.

The term has been used to refer to the web recently, but most of the web isn't a multimedia experience. Until Netscape's *Navigator 1.0* caught on in mid 1995, the number of websites using graphics was still quite small, while sites using sound still aren't common.



The MP3 on the Amiga site contains links to all sorts of MP3-related resources online.

BANDWIDTH

There is a good reason why the web is still a predominantly silent world: bandwidth. High quality audio takes up an lot more bandwidth than a few high quality images. As a result, web page authors might supply a few Wav sound samples or include a MIDI file or *ProTracker*-compatible module on pages which a web browser plugin can play back, because these can be kept down to some sort of reasonable size.

But, as *GMplay* users will be aware, the vast majority of MIDI files that are freely available tend to be very cheesy renditions of pop tunes.

Even if you've written your own killer tune, the chances are it will sound less funky once it has been mangled by the general MIDI sample set.

For several years, the hunt was on for a sound file format that wouldn't eat bandwidth, enabling the transfer of CD-quality sound between computer users over the net. Then, several months ago, the .mpg layer 3 (MP3) file was born.

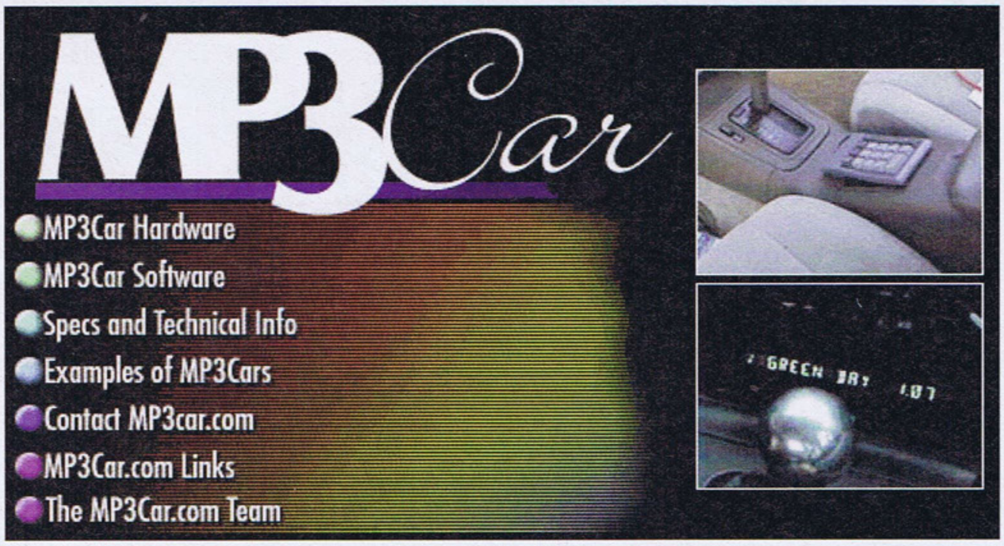
A typical four-minute pop song can be encoded into an MP3 file that is barely 4Mb in size, and decoded on the fly by a suitably powerful machine running the appropriate software for CD-quality playback.

A 166MHz Pentium CPU is about the least powerful system on which the real-time decoding required for MP3 playback can be achieved on a PC, but the Amiga can get away with an '030/50 running something like *Mpega* (from the mus/play directory of Aminet).

Within a few months of MP3 catching on, the web was full of sites offering huge collections of commercially available songs for free download in MP3 format.



Hugo Altman's in-car MP3 device, which has inspired so many other techies to develop their own MP3mobiles.



The new MP3car site looks as though it could grow into a shrine for mobile MP3 fans from all over the world.

I FOUGHT THE LAW...

This was highly illegal, of course, and the response from record companies and trade associations like the British Phonographic Industry was to come down fiercely on high-profile sites, assert the copyright in their music and demand that MP3 file collections were closed. Several months on, there are still a fair few musical pirates trading their wares on the net, but it's certainly not taking place on anything like as large a scale as it was earlier this year.

The big MP3 sites take care to only carry legal files, although it's not hard to find sites (such as Pigeons.net) which provide links to other servers where dodgy MP3 files are still held.

These sites simply include a message in a disclaimer, advising visitors to buy legitimate copies of songs which they like. Of course, the reason record companies have worked hard to stamp out illegal MP3 trading on the net is not because they object in principle to the idea of electronically transferring music, it's because they want to make sure they still get paid for the music. As such, they'd like to sell MP3s to music fans, rather than having them trade copyright material for free amongst themselves.

Even the marketing men in the ivory towers of multinational record companies can see that, in the MP3 format, there is at last a highly efficient format in which music can be stored.

...AND THE LAW WON

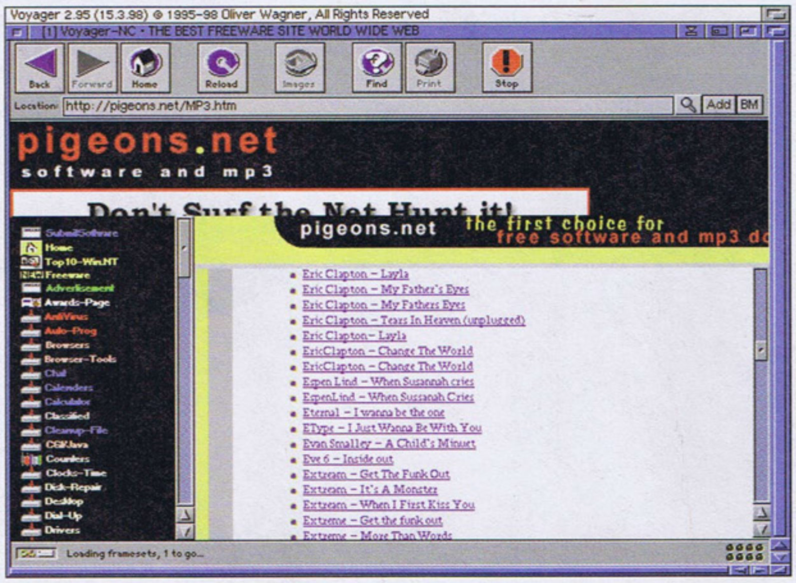
For the time being, you won't find many record company sites from which you can purchase and download the new album by your favourite band, but that's not to say such sites won't become more common soon. Meanwhile, MP3 files present music-loving computer fans with other opportunities.

Firstly, unsigned bands can set up a web page and make samples of their tunes available in the format. Through the cunning use of meta tags describing the type of sound the band has, such a web site could get a lot of hits once indexed by a couple of search engines.

Secondly, and much more importantly for non-musical computer fans, MP3 could well become an important musical storage medium in a wider context.

Companies are already developing portable MP3 players so that people who own CD-R drives can stick dozens of their favourite tracks onto a single disk and then listen to them anywhere.

Just as excitingly, a handful of techies around the world have cobbled together in-car MP3 systems based around ordinary home computers.



Sites linking to illegal MP3 files are not hard to find, but you'll be breaking the law if you download and keep the tunes.

DRIVING IN MY CAR

One person to develop such an in-car player was Casey Halverson, who decided to base his system around the A1200, with MP3 files stored on the hard drive. On his website, Casey details exactly how he has gone about powering the machine from his car battery, and describes the software he has written to provide a front-end to the system.

Casey can change tracks and control his in-car Amiga using a device connected to his joystick port. He uses an LCD TV screen to give visual feedback in his car. With a little tinkering, technically savvy Amigans could probably use the smaller and cheaper fruit machine-style digital text displays. This is something which has been tried by Hugo Altman, whose website details his attempts at developing an in-car MP3 system based on a PC running *Linux*.

Many of the technical details Hugo supplies are very relevant to Amiga users contemplating beefing up their own in-car entertainment set-up, not least because many of the problems encountered with creating a "tethered" MP3 player are the same, irrespective of the hardware at the centre of the system.

Of course, continuing the theme I've been developing in Amiga.net of late, that of wiring all manner of technologies together, it might be possible to set up an in-car Amiga to perform other helpful functions.

For instance, a system using an LCD screen could provide maps to aid your navigation, via some simple, custom-written software multitasking with your MP3 control software. If the computer could be connected to something like a mobile phone then the possibilities would effectively be limitless.

For those who now have a couple of Amigas, perhaps because of a move to a big box Amiga or a tower, the idea of giving a new lease of life to the older, less powerful machine as the ultimate in-car entertainment system and computer is an attractive one. With its compact build, efficiency and reliability, there's surely no machine better suited to the task than the Amiga.

RELEVANT URLS

MP3 on the Amiga: http://www.terravista.pt/guincho/1139/amiga_mp3.html
Pigeons.net: http://pigeons.net/MP3.html
MP3.com's Hardware guide: http://www.mp3.com/hardware/index.html
Casey Halverson's AmiMP3Car: http://home1.gte.net/flogger/mp3car/
Hugo Altman's MP3mobile: http://utter.chaos.org.uk/~altman/mp3mobile/

CREATIVE

The indispensable guide to getting the most out of your Amiga



The dust had hardly settled on his P45 before the irrepressible Tony Horgan was hard at work preparing our first new tutorial for you this month. There's no keeping him away from his "choons", and the good news for you is that every month he will be sharing all the knowledge he has gained from years of torturing other people's eardrums. I just hope he isn't too loud to start with...

Another name you might recall from a different place is also starting a new tutorial this month. Neil Bothwick will be introducing you all to HTML.

Even if you aren't on the Internet, it's probably one of the most important new mediums of the age, and you'll all be experts in no time!

Nick Veitch

SEND IT IN!

WE NEED YOUR INPUT.

Is there something that you would like to see covered in one of the current tutorial series? Why not send your suggestion to us at the magazine. Here are some things you might like to think about:

PROGRAMMING
Is there a language you can't get to grips with? Or maybe you want to know how to do a specific thing in C or ARexx? You might never find the answer unless you write in and tell us about it!

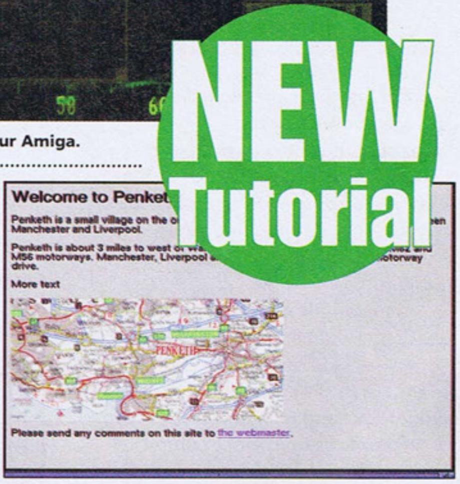
UNDER THE BONNET
Unsure of how how your Amiga really works. Not sure if you are getting the best from your hardware - write to us.

GRAPHICS
Is there something you desperately want to be able to draw? Drop us a line! Contact us at:

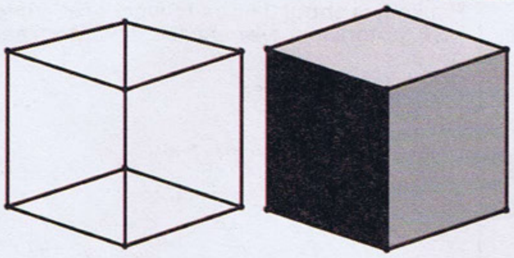
AF Creative • 30 Monmouth Street
Bath • Somerset • BA1 2BW
Or email: amformat@futurenet.co.uk
putting "Creative" in the subject line.

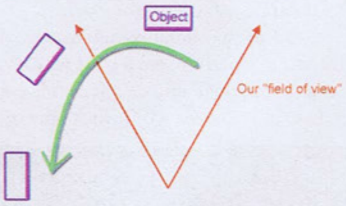


The best introduction to getting the best sounds from your Amiga.

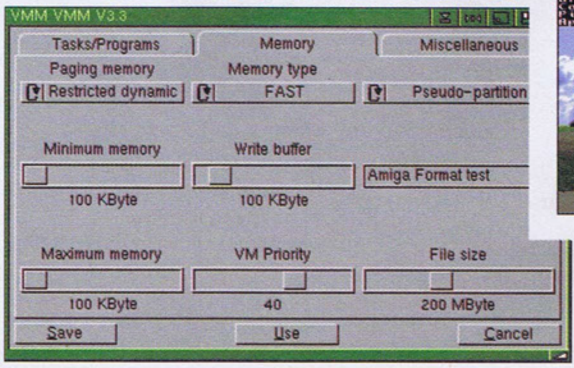


Put your city, yourself or anything you like on the net.





After this tutorial, you'll soon be creating your own Amiga games.





Simon Goodwin explains all about the power of Amiga memory management.

Get almost magical memory power...

Using HTML

Neil Bothwick, head of Amiga ISP Wirenet, starts a new tutorial for people interested in HTML.

NEW Tutorial

Most Internet Service Providers give free web space with accounts, yet only around 20% of subscribers use this space for any kind of website.

There are a lot of reasons why people don't use their web space, but the one that doesn't count is that creating web pages is difficult – it isn't.

> *<HTML> should be the first thing in the page. It tells the browser and web server that it is a web page…*

You may hear people talking about "HTML coding", or even "programming" web pages, but it's nowhere near as complicated as that. Web pages are created using HTML (HyperText Markup Language), which is just a mixture of plain text and markup "tags".

For example <B>Here is some text</B> would appear as bold text, because it is surrounded by the <B> and </B> tags to show where the bold type should start and end, and it really can be as simple as that. More complex websites can involve a lot more, but the basics are very straightforward.

Rather than taking each aspect of HTML in isolation, we'll start with a basic home page and add features each month as we cover a different part of HTML. Before we do that, let's look at the basic types of HTML tags we need to know about.

TAGS

An HTML tag is a keyword enclosed in "<>" symbols. There is a large range of tags available but most of them either change the way text is displayed, include another file in the page, such as an image or a sound, provide a link to another page or site, or mark a place in the page.

Many tags are referred to as "containers" as they have a start tag and an end tag which affect whatever is contained within them. The end tag is the same as the start tag, with a "/" before the keyword, like the <B>bold text</B> example earlier. Tags can be written in lower case or capitals. The browser doesn't care which you use, although many people use capitals to distinguish the tags from the text when editing their pages.

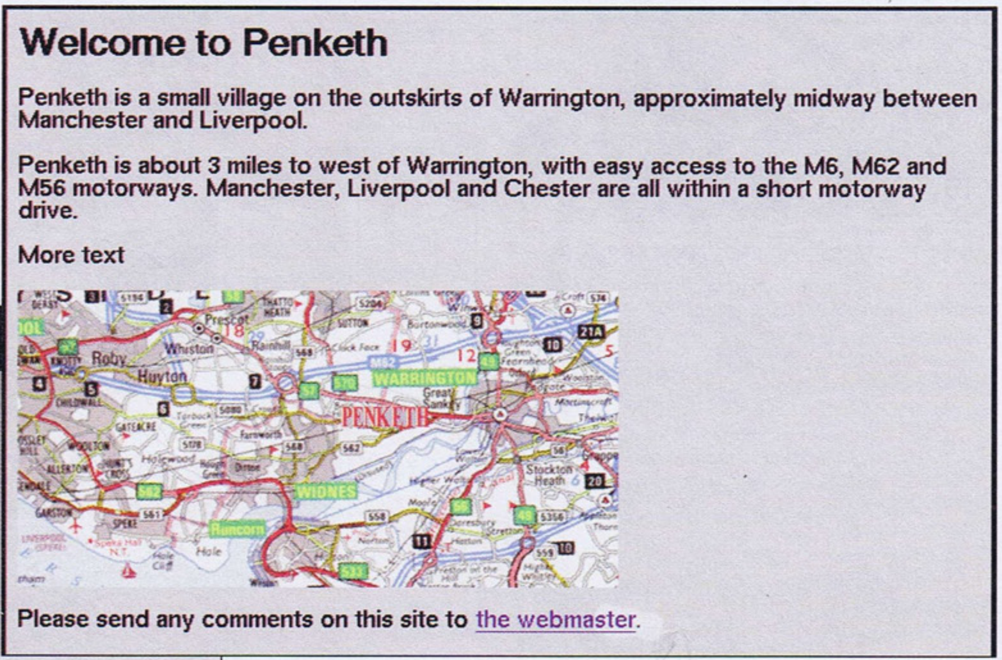
There are four tags that are required in all web pages: <HTML>, <HEAD>, <TITLE> and <BODY>, together with their closing tags.

<HTML> should be the first thing in the page. It tells the browser and web server that it is a web page and not some other type of file, and the document should end with </HTML>. Next you need a section contained in <HEAD>…</HEAD>. This information

Contents

Make sure you don't miss a tutorial in this series. Call our subscription hotline on 01458 271102.

Our first web page, in all its glory.



Listing 1

THE HTML FOR OUR FIRST WEB PAGE

```
<HTML>
<HEAD>
<TITLE>Penketh Home Page</TITLE>
</HEAD>
<BODY>
<H2>Welcome to Penketh</H2>
Penketh is on the outskirts of Warrington...
<P>
More text
<P>
<IMG SRC="map.gif" ALT="Road map" WIDTH="450" HEIGHT="237">
<P>
Please send any comments on this site to
<A HREF="mailto:webmaster@home.com">the webmaster</A>.
</BODY>
</HTML>
```

WEB PAGE CREATION SOFTWARE

There are several web page creation programs available, some of which claim to give WYSIWYG (What You See Is What You Get) editing. This isn't possible because HTML is a markup language. It's not WYSIWYG like a word processor or *PostScript*. It tells the browser how you want each item rendered, relative to the rest of the document, but it doesn't specify an explicit size or position.

HTML is an ordinary text file and all the markup tags are plain text, so a text editor is all you need. In fact, starting HTML with a text editor gives you a much better understanding of what's going on and makes it easier to cope when things don't work out quite as you expected.

There are some programs that make the writing of HTML more convenient, such as *WebPlug*, or there are HTML extensions for text editors that have much the same effect. *AWeb* comes with *HTML Heaven*, an add-on for many text editors, which handles much of the donkey work of inserting tags into the text. I prefer to use the *GoldED* text editor with its own HTML add on.

Because HTML is not WYSIWYG, it's important to check how your page appears in as many bowser configurations as possible. Even resizing the browser window or opening it on a different depth screen can significantly alter the appearance of your page. Compare Figure 1 with Figure 2. Both show the same page, viewed in the same browser, but with different screenmode and font settings.

is not displayed in the browser window but it can be used to hold a variety of information about the page.

<TITLE>...</TITLE> needs to go in the HEAD section as this is the title of the page, as displayed in the title bar of the browser window. Finally, <BODY>...</BODY> contains the text to be displayed, together with its markup tags.

A bare bones HTML page would be

<HTML>
<HEAD>
<TITLE>My home page</TITLE>
</HEAD>
<BODY>
Some boring stuff about me, blah, blah…
</BODY>
</HTML>.

It's hardly the world's most exciting website, but it works.

> *… starting HTML with a text editor gives you a much better understanding of what's going on…*

A REAL WORLD EXAMPLE

A more useful website would be one that provides information about your local town, and that's what we're going to work with throughout this series of tutorials. We'll set up a basic page this month and expand it as we cover the various features available with HTML.

Each page on a website is saved as a separate file, with a .html extension. The usual name for the first page is index.html, although some systems use home.html or main.html; check with your ISP.

Listing 1 shows the HTML of the first page and Figure 1 shows a possible representation of it in a browser.

The first five lines use tags we've already covered and line six introduces <H2>. Most text on a page is displayed in the default font, as set in your browser preferences, but it is normal to display headings and sub headings in a larger or bolder font.

Look in the fonts section of your browser preferences and you'll see settings for six headline fonts. These are represented by the tags <H1> to <H6>, with <H1> being the largest.

Normally <H5> and <H6> are smaller than your normal text font and are used for footnotes and suchlike. After the closing </H2> tag, the text reverts to the default font.

A web browser will format text to fit in the display window, taking no notice of line breaks, tabs or multiple spaces in the original HTML. All of these are displayed as a single white space. It doesn't matter whether your HTML contains:

A line of text

or:

A
line
of
text.

They both appear the same.

That's why the <P> tag appears in the example – it tells the browser to start a new paragraph, leaving a blank line after the previous one.
 does a similar thing, but without the blank line.

ADDING PICTURES

A page containing nothing but text is going to look a bit boring, so let's add a picture with the <IMG> tag. The tags we have looked at so far each consist of a single word. <IMG> shows that a tag can also have attributes.

These contain further information to be used in displaying the tag. They appear after the tag name, separate from it and each other by spaces. Many tag attributes take a value, which should usually be enclosed in quotes, like: <IMG SRC="map.gif" ALT="Road map" WIDTH="450" HEIGHT="237">.

<IMG> displays an image at the current position in the text. On this page it has <P> tags before and after to make sure it appears on a line by itself. Try removing these to see the difference they make.

The most important attribute is SRC because it specifies the image file to be displayed here. In this case it shows only the file name, since the file is in the same directory as the HTML file.

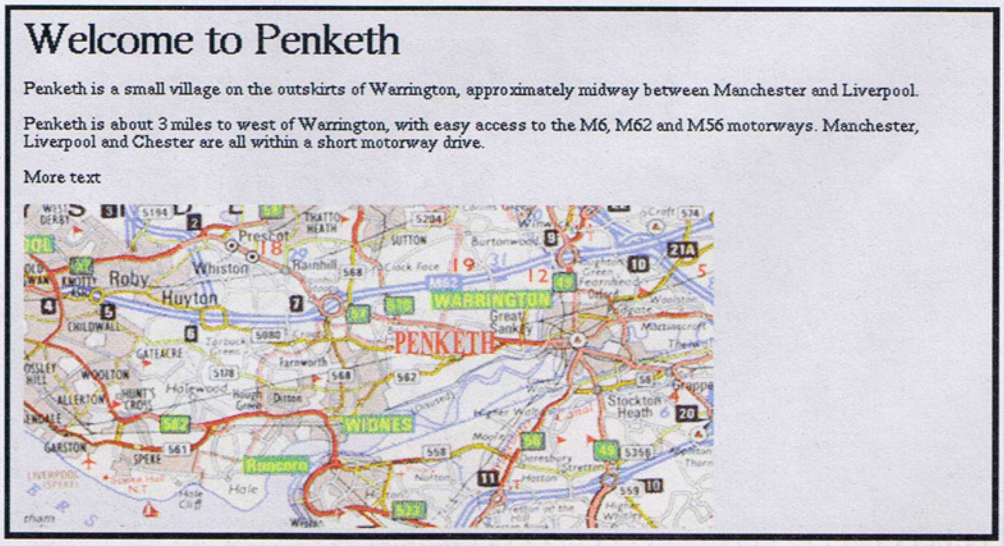
ALT contains text to be shown by the browser if you have image loading turned off, or while you are waiting for the image to load. The WIDTH and HEIGHT values tell the browser how much space to allocate for the image.

If you don't give this, the browser will have to redraw the entire page once the images starts loading, and it gets the size from the image file. This is why some web pages redraw several times in quick succession when loading images.

LINKING

The last tag we'll look at this month is <A>, used to define a link. In this case it's a mailto link so people can contact the page author by email. As with <IMG>, <A> has an attribute, HREF, that specifies the destination of the link (your email address). It's also used to link other pages on your site, other sites or other sections of the same document.

Finally, we close the <BODY> and <HTML> tags at the end of the document and save it as index.html. That's all there is to creating a basic page, a foundation for a full website.



The same page in the same browser, but with different settings in the browser preferences.

Sound Advice

Our brand new audio series begins with Tony Horgan taking a look at the exciting new developments in hard disk recording.

NEW Tutorial

Contents

Make sure you don't miss a tutorial in this series. Call our subscription hotline on 01458 271102.

Most Amiga users have been able to record CD quality audio direct to hard disk for some years now, but until recently there didn't seem to be much point.

After all, what's so good about filling your drives with giant sound samples? If you wanted to pass them on to anyone else you still had to record them to cassette tape or buy a DAT recorder. Besides, there was little you could do with your hard disk recordings once they were there anyway, short of a bit of basic cutting and pasting.

That was before the arrival of affordable CD writers. Put a CD-R drive into the equation and suddenly hard disk recording becomes the lynchpin in turning your Amiga into a professional audio editing and mastering system.

"Your Amiga can multitask very smoothly, but just how smoothly depends on the load you put on the CPU."

GO ON, LARGE IT

First of all, let's just confirm what it is we're talking about here. Hard disk recording is basically sampling direct to a hard disk or any other available drive. It's just like normal sampling (to RAM) except that the sound is written straight to the disk instead. When the sound is played back, the sound sample is spooled from the disk and out through your chosen sound card or the internal audio outputs.

The main and obvious advantage of having the sound on your hard drive instead of in RAM is that you can work on much larger recordings than you would otherwise have room for. Just like editing samples in RAM, with the right software you can now edit hard disk recordings using all the latest processes and effects.

At the moment there's no software available that will allow you to record audio direct to a CD-R. If only for that reason alone, hard disk recording is an essential stage if you want to record your own audio CDs – first you record a sample to your hard disk and then you cut a CD from the sample file.

Once you've got that sussed you can start to get adventurous with your editing, adding effects that would otherwise be out of your reach.

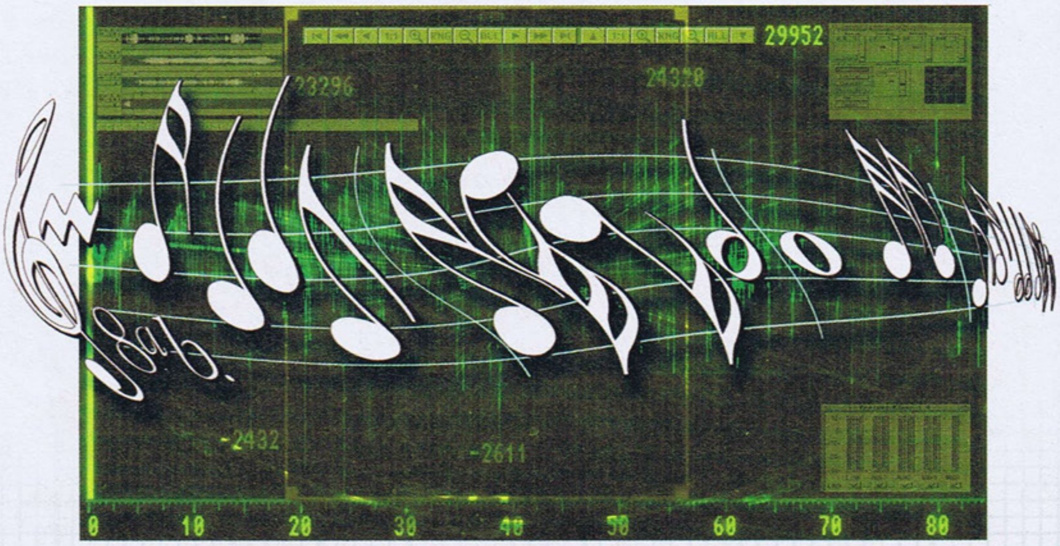
At this point you might be wondering how you are going to record your music to your hard disk if you are already using your Amiga to play it in the first place. If so, have a bonus point for thinking ahead.

The answer depends on how you are making your music. Your Amiga can multitask very smoothly, but just how smoothly depends on the load you put on the CPU. If your music is completely MIDI based then you should have no problem running your sequencer and hard disk recording software simultaneously. If it isn't, you'll probably find there's a conflict of some kind somewhere along the way, whether it's the player and the recorder both wanting to use the same sound card, badly behaved tracker software dumping the operating system or just a lack of CPU horsepower to keep everything going in time without drop-outs.

If this is the case then you've got two main options: either you get yourself a second Amiga so that one can play while the other records, or you get a high quality digital recorder such as DAT, DCC or MiniDisc (from which you can then record to hard disk without any notable loss of quality).

If you happen to make your music using *OctaMED SoundStudio* (without MIDI extras) or a tracker which supports AHI output then you're laughing. In either case, you can record direct to hard disk from your tracker in 16-bit stereo, even if you don't have a sound card. You can also edit in 16-bit stereo and write a CD with it, all without a sound card.

Of course, it may be that the sound or music you're recording isn't generated by an Amiga at all (it may be a previously recorded live band performance or a DJ mix), in which case



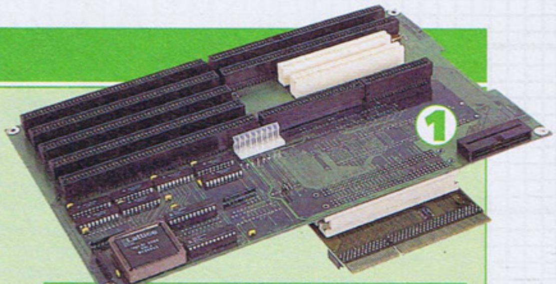
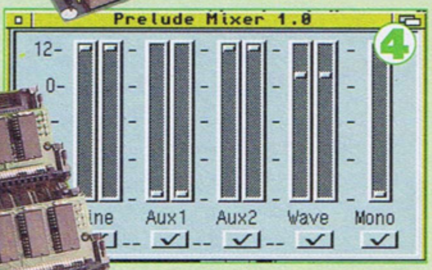
EQUIPMENT CHECKLIST

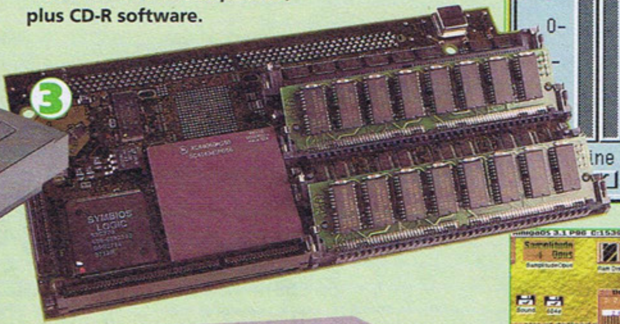
This is what you'll need to get started with the most basic hard disk recording and editing set-up. This really is the absolute minimum: editing will be very slow and writing CDs without hiccups could be hit and miss.

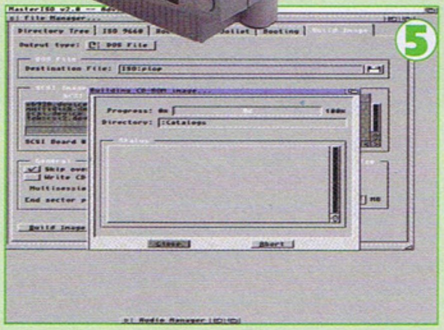
- **A1200.**
- **IDE hard drive.**
- **50MHz '030 CPU.**
- **Extra RAM.**
- **Aura or Clarity 16 sampler.**
- **Squirrel CD-R.**
- ***SoundProbe* or *Samplitude*, plus CD-R software.**

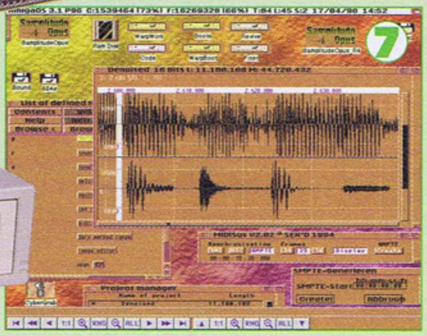
This is a far more suitable system which would offer bearable editing times and would easily write CDs at double speed or faster (especially when using the SCSI on the CPU card).

- **Zorro Amiga.**
- **CyberStorm '060.**
- **Removable media SCSI drive (eg. Jaz).**
- **16-Bit Zorro sound card (eg. Prelude).**
- **SCSI CD-R drive.**
- ***SoundProbe* or *Samplitude*, plus CD-R software.**





Things you could really use: (1) A Zorro busplane if you have an A1200, but it's better to get a big box machine from the start. (2) A Jaz drive (Jaz2 actually). (3) The mighty CyberStorm '060 Mk3. (4) The Prelude 16-bit sound card. (5) *MasterISO v2*, to go with a CD-ROM writer. (6) The Mitsumi from Eyetech. (7) *Samplitude Opus* from ACT in Germany, the finest 16-bit sampling software around.

there's no problem. You can simply record to hard drive 'live' from your DJ mixer or from the tape you already have.

JUST HOW BIG?

There will inevitably come a time when RAM is so cheap that we can all afford to have a couple of gigabytes of it under the bonnet, but until then hard disk recording is the only way we can work on the enormous files that big audio projects generate.

At full CD rate, a single minute of audio consumes 9Mb of hard disk space. Unless you want to edit by the seat of your pants, you'll need an undo buffer too, which will use yet more space.

Depending on how your editing software is configured, you might actually need double the amount of space on your drive if it wants to have a 'working version' of the recording as well as a 'project file' copy of what is basically the same thing. If that seems to be the case, you can often cut a CD from the working version without having to actually save out the file as a project first (do this behind your editing software's back while it's still up and running).

Due to the sheer size of the files you'll be working with, you can spend quite a while twiddling your thumbs as you wait for the sound to be processed and the changes to be written. *Samplitude* does well to reduce these to a minimum with its Virtual Project features, so be sure to check those out.

Another problem is that you'll find your hard disk filling up very quickly. If you intend to do a great deal of hard disk recording then it's best to use a removable media drive, such as a Jaz. This will allow you to keep copies of your productions on cartridges, rather than having to delete each one to make room for the next.

You could, of course, just keep CD copies of your productions, but that way you can only work on one project at a time and can't go back to alter previous projects without a lot of hassle.

THE LAST BIT

Once you've got the hang of the basics you'll feel more at ease experimenting with the limitless possibilities that arise once your music is resident on your hard disk. *Samplitude*, for example, offers features such as multi-track bouncing and cross-fading, CD track numbering of a single continuous audio mix and professional quality resampling.

SoundProbe's strengths lie in its array of effects that can be applied to your productions, including simultaneous or independent time and pitch shifting and bending, a vocoder, resonant filtering, noise reduction, reverb and all kinds of distortion effects. Now off you go and annoy those neighbours. AF

Tony's Tips

- **Always record at 44.1KHz in 16-bit stereo for CD mastering.**
- **Set the block size of your hard disk (or chosen recording drive) to at least 16K and set the editing software's buffers to a number divisible by that (eg. 16, 32 or 128K).**
- **Rudely interrupting your Amiga while it is writing a file will invalidate the drive and mess the whole thing up (make sure you only use the Cancel or Stop functions from your software).**
- **Try working on smaller files to begin with and tweak settings to get maximum speed when editing.**
- **If your CD writer keeps failing, quit all other applications, adjust buffer sizes and set write speed to single speed.**
- **You can cut a CD from the 'main.buffer' file of *SoundProbe* without having to save out duplicate 'actual file' first (don't quit *SoundProbe* first).**
- **If in doubt, record your sound too quietly rather than risk clipping.**
- **However, if you record via Aura, the input volume level is critical as the initial sampling is only performed with 12-bit resolution (then it's scaled up in software).**
- **Make sure you save your audio projects in a format readable by your CD-R software.**

C for Yourself

The Amiga has always been the favourite platform for 3D graphics, and now you know enough C to create your own, as John Kennedy demonstrates.

Contents

Missed a tutorial in this series? Call our back issue hotline on 01458 271102.

Three dimensional computer graphics is such an immense subject that it could (and does) fill entire books, never mind magazine articles. That said, if you've been following this series of tutorials you now know enough general *C* and Amiga programming to write some programs which can display 3D graphics. In fact, enough to write a game.

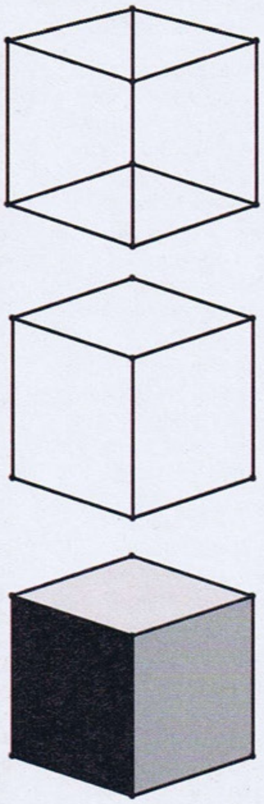
> "Another step up is to draw solid panels of colour, and from there we can move to textures, light and shadow…"

Before we start running, let's walk a little more and think about what 3D graphics actually consist of. The problem is that we need to represent on a flat, 2D computer screen an object which has three dimensions, breadth as well as width and height.

It turns out that this is quite an easy thing to do as we can fake perspective quite simply by scaling objects down the further they are away from us. So, if we were drawing a box, the face furthest away from us is going to look smaller than the face closest to us. Our brains then do the rest of the work and decide that we're looking at something solid.

There are many ways to draw 3D graphics, but we're going to deal with the easiest – simple wireframes. Imagine a cube. It needs eight points and twelve lines to describe it. With those twelve lines we can create a very convincing image on the screen, and it hardly takes the very latest in 3D hardware accelerators to draw twelve lines.

A step up from wireframes is "hidden line removal", which only displays those lines you can actually see. Another step up is to draw solid panels of colour, and from there we can move to textures, light and shadow shading, transparency and other physical attributes. You can see why we're sticking with wireframes!



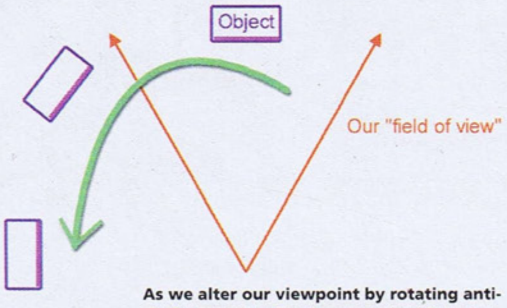
There are many ways to draw objects in 3D but here are the three simplest ones: Wireframe, Hidden Line Removal, and Solid.

To store our cube in memory, we can store a list of the eight points. We need to store the points in three dimensions – that is, we keep a record of the X, Y and Z co-ordinates of each point. Drawing the cube is then a matter of reading the points, mapping them from 3D (the virtual space) to 2D (the monitor screen) and deciding how to draw the lines.

Moving the object is easy as all we do is update the X, Y and Z co-ordinates and the object's position in the virtual space will alter. Rather than alter each co-ordinate, it's easier to store a single position for the object as a whole and then add this to the co-ordinates when it comes to drawing them.

Where the maths starts to get a little tricky is when we want to rotate the 3D object. We need to rotate the object for two reasons. Firstly, the object itself might spin. If the object was an alien tank instead of a cube, we would want it to change direction. An object is said to "spin on its own axis" when it rotates like this.

Secondly, when we move our viewpoint, it appears than the objects not only rotate around us but they also spin around their own axis in order to keep the same face towards us. In the example picture (above right), looking straight down, as we turn to the left the object moves into view. It rotates around its own axis as it does so, otherwise the purple face wouldn't be towards us.



As we alter our viewpoint by rotating anti-clockwise, the objects we are looking at appear to rotate around their own axes.

Rotating objects requires a little magic mathematical formula. Using Sin and Cos functions, it's not too hard to spin an object around its own axis.

To spin an object around another axis we can first centre it on that new axis, spin it, and then move it back.

Yes, it all sounds complicated and like something you would fall asleep listening to in school, but once you see it in action, you'll understand it better and be able to use it yourself without thinking twice about it.

GET CODING!

Enough maths, then. Let's write a program which describes a cube, draws it and rotates on the screen in front of us, in a window on the Workbench desktop. First of all, we need some data structures to define the locations of those points. In fact, let's make things even easier by defining the points as pairs of points, each with a line between them. This will mean there is some duplication, but it makes the drawing routine much easier to understand.

We'll create a *C* structure for the points and then define them as though the cube was sitting right in the centre

of an X, Y, Z grid – the corners will all have co-ordinates either at 1 or -1. Later on you can sketch out your own shapes (pyramids, spaceships, tanks and so on) on graph paper and use them instead.

Here's the data structure that will hold the co-ordinates, and the structure that defines the cube:

```
struct cord_type {
	float x,y,z;
};

struct cube_type {
	struct cord_type p1[24];
	struct cord_type p2[24];
	float position_x;
	float position_y;
	float position_z;
} cube;
```

We now have a variable called "cube" which contains the two sets of points (for Moving to, and then Drawing to) and the overall position of the cube.

We can then create another array storing the initial positions of all these points, and create a function which initialises the cube structure:

```
struct cord_type cube_lines[] {
	{1,1,1},{-1,1,1},
	{-1,1,1},{-1,-1,1},
	{-1,-1,1},{1,-1,1},
	{1,-1,1},{1,1,1},
	{1,1,-1},{-1,1,-1},
	{-1,1,-1},{-1,-1,-1},
	{-1,-1,-1},{1,-1,-1},
	{1,-1,-1},{1,1,-1},
	{1,1,1},{1,1,-1},
	{-1,1,1},{-1,1,-1},
	{-1,-1,1},{-1,-1,-1},
	{1,-1,1},{1,-1,-1},
};

void define_cube()
{
	int i;
	int j 0;
	for (i 0;i 12;i )
	{
		cube.p1[i] cube_lines[j ];
		cube.p2[i] cube_lines[j ];
	};
	cube.position_x 0;
	cube.position_y 0;
	cube.position_z 5;
}
```

That's the cube defined. Actually drawing it is quite straightforward. We use the Z co-ordinate (the depth) to scale the X and Y co-ordinates and this provides the perspective effect.

GRAPHICS BOOKS

The best-known book for 3D graphics is *Computer Graphics: Principles and Practice*, by Foley, van Dam, Feiner and Hughes. It's the classic work and if you're looking for it, I recommend the version which uses C for listing the example programs. The ISBN is 0-201-84840-6. Runners up include *Fundamentals of Three-Dimensional Computer Graphics* by Alan Watt, ISBN 0-201-15442-0, and *Interactive Computer Graphics* by Burger and Gillies, ISBN 0-201-17439-1. All are published by Addison-Wesley.

For more details on this, consult any of the computer graphics books listed in the box on this page. Here's the function for drawing the cube:

```
void draw_cube (struct RastPort *rastport)
{
	// Draw the Cube in 3D

	float x1,y1,z1,x2,y2,z2;
// 3D co-ordinates
	float px1,py1,px2,py2;
// 2D co-ordinates
	int i;

	// Clear window
	SetAPen(rastport,0);
	RectFill(rastport,20,20,180,180);

	// Draw cube
	SetAPen(rastport,1);

	for (i 0;i 12;i )
	{
		x1 cube.p1[i].x cube.position_x;

		y1 cube.p1[i].y cube.position_y;
		z1 cube.p1[i].z cube.position_z;
		x2 cube.p2[i].x cube.position_x;
		y2 cube.p2[i].y cube.position_y;
		z2 cube.p2[i].z cube.position_z;

		if ((z1 1) && (z2 1))   // check in case cube is "behind" us
		{
			px1 200*(x1/z1);py1 200*(y1/z1);
			px2 200*(x2/z2);py2 200*(y2/z2);
			px1 HALFWIDTH;px2 HALFWIDTH;
			py1 HALFWIDTH;py2 HALFWIDTH;
			Move(rastport,(int)px1,(int)py1);
			Draw(rastport,(int)px2,(int)py2);
		}
	}
}
```

Finally, the function that causes the cube to spin on its own axis. This is the one that features the Sine and Cosine functions, and that magic formula. Again, any good text book will explain it in depth.

```
void spin_cube (float angle)
{
	// Spin around Y axis

	float zz,xx;
	int j;

	float sd,cd;
	sd sin(angle*rad);
	cd cos(angle*rad);

	for (j 0;j 12;j )
	{
		xx (cube.p1[j].x*cd)-(cube.p1[j].z*sd);
		zz (cube.p1[j].x*sd) (cube.p1[j].z*cd);
		cube.p1[j].z zz;cube.p1[j].x xx;
		xx (cube.p2[j].x*cd)-(cube.p2[j].z*sd);
		zz (cube.p2[j].x*sd) (cube.p2[j].z*cd);
		cube.p2[j].z zz;cube.p2[j].x xx;
	}
}
```

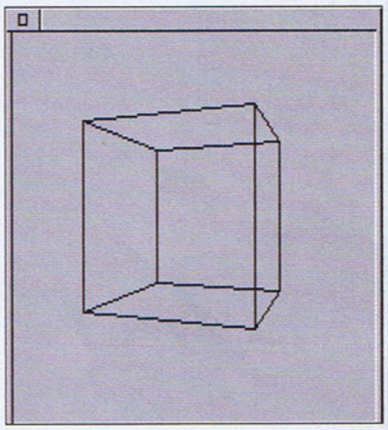
We can now drop these modules into one of the standard listings which we've used many times before. Here's how I included them in a short program which opens a window (200x200), initialises the cube and then keeps drawing it until the user closes the window. Only the core of this main function has been listed (see the Listing 1 box below).

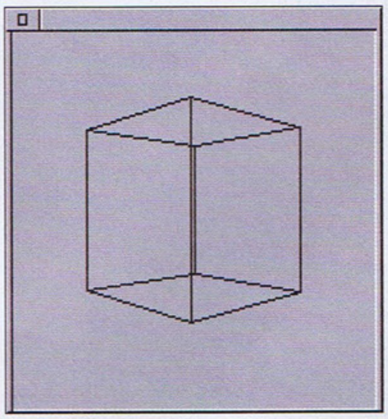
When you get the program running you should see a lovely little cube whizzing around in the window on your desktop. Clicking in the close gadget will shut the program down.

Listing 1

```
win=OpenWindowTagList(NULL,win_tags);
if (win!=NULL)
{
// Window open, find the RPort draw your stuff!
	rastport=win->RPort;
	define_cube();
	draw_cube(rastport);
	while (flag)
	{
		spin_cube(1.0);
		draw_cube(rastport);
		while (msg = (struct IntuiMessage *)GetMsg(win->UserPort))

		{
			switch (msg->Class)
			{
				case IDCMP_CLOSEWINDOW:
				flag=FALSE;
				break;
			}
			ReplyMsg((struct Message *)msg);
		}
	}
	CloseWindow(win);
```





OK, so our first attempt at 3D graphics might not look very state-of-the-art, but every 3D game uses the same basic techniques of perspective mapping and the sin/cos rotations. That's every game, from the simplest 3D maze program to the most sophisticated 3D, solid, texture mapped *Quake* clone. Next month we'll look at expanding this little 3D engine into something a little more like a game. Don't miss it!

Under the Bonnet



Simon Goodwin uncovers the might of memory management.

AFCD33:-In_the_Mag-/Under_the_Bonnet/



Contents

Last month we looked at the hardware side of memory – widths, speeds, sizes and sockets. Now we focus on logical, rather than physical, memory, and the magic of memory management which means that RAM on a modern Amiga is no longer constrained by its sockets.

> MMUs intercept every memory access made by the processor, translating the 'logical address' specified by the program…

If your Amiga has an MMU (Memory Management Unit) you gain impressive, almost magical, powers, and enough rope to hang yourself many times over.

However, don't expect the Amiga OS to tame the MMU for you. Amigas are designed to run well without an MMU, and while this boosts speed it can also introduce traps.

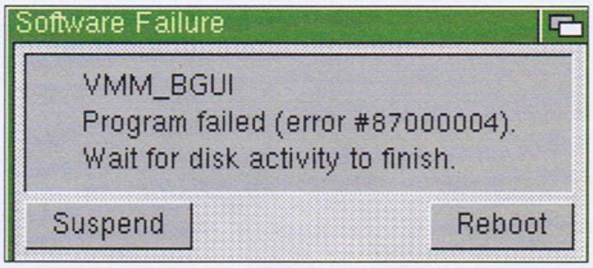
RAM can become ROM, or vice versa. Virtual memory can fool the system into using hard disk space as if it was real RAM. Memory addresses can be shuffled around and changes automatically monitored, so programs know exactly which parts of an image need to be redrawn and naughty routines admit their faults rather than clobbering mild-mannered neighbours.

Memory can be write-protected, add-on hardware can be hidden or simulated, and all in a 'transparent' way so the system carries on blithely unaware, just like a traditional Amiga.

MMU VARIANTS

MMUs feature in most 32-bit processors in the 68K family, apart from cut-down EC chips, and are essential components of PPC accelerators. All the 68040 and 68060 systems on the market now include MMU hardware.

You can fit an 68EC040 chip in a Commodore A4000/40 processor socket, but Commodore never shipped machines in that configuration.



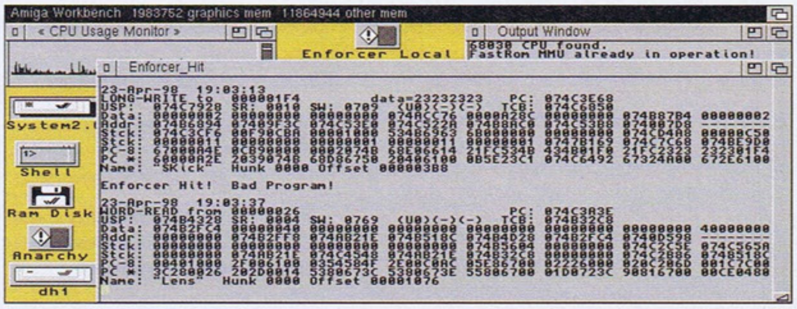
Alas, Virtual Memory isn't always conducive to a stable system.

68EC030s are more common, found in A4000/'030s and budget accelerators running at up to 40MHz.

Top-speed 68030s always have an MMU, so an official 50MHz rating is a sure sign of an accelerator with memory management. 68020s require the external 68851 MMU, versatile but slow, as featured in Commodore's A2500 and A2620 expander.

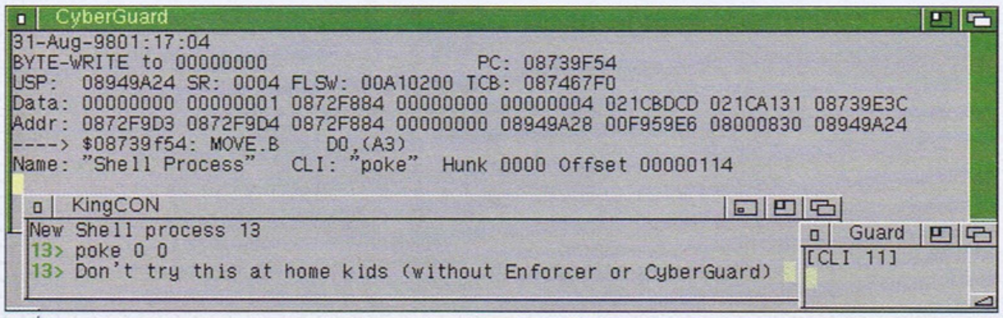
Stock 68EC020 A1200s lack memory management, although they can be usurped by an MMU-equipped chip, via trapdoor expansion.

Hardware variations mean MMU programs are often 68040 or 68060 specific, or may only work on older '020/'030 systems. Thomas Richter's new *MMULib*, on Aminet and our CD, adds a sorely-needed interface layer, so applications can use memory management without worrying about the particular CPU in use.



Mike Sinz's *Enforcer* detects dodgy code in *SKick* and *Lens*.

However, for the time being we're stuck with programs that roll their own MMU code for each system, with a consequent risk of incompatibility.



phase 5's *CyberGuard* traps some deliberate RAM vandalism!

HOW MMUs WORK

MMUs intercept every memory access made by the processor, translating the 'logical address' specified by the

program into a 'physical address'. They do this using 'mapping tables' and Address Translation Units (ATUs), which have small caches to keep track of recently accessed locations.

It's wasteful to store separate translations for every possible address – on a 32-bit system, that would require four times as much memory for tables as there is memory accessible.

As a result, MMUs divide memory into 'pages', usually 4K or 8K in size, though early MMUs, like the 68030 one and the add-on 68851 for 68020s, support more possibilities.

TRANSLATIONS

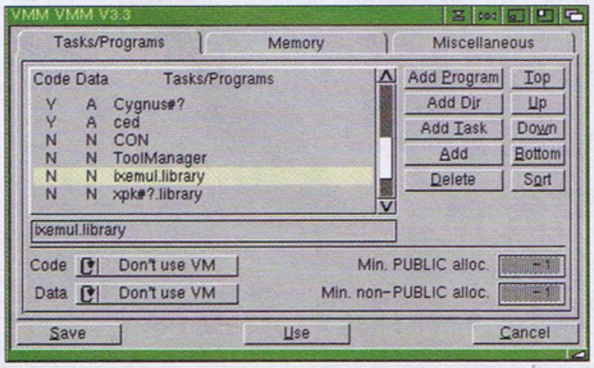
Translation tables contain a long word for each page, specifying a replacement value for the most significant bits of each logical address. They use the bits left over to fine-tune access; for instance, to write-protect memory, for monitor usage, or to bypass the data cache when accessing chip RAM or Zorro cards.

Instruction, data, user and system supervisor accesses can be sifted, although Amigas normally use one set of tables for all purposes. To avoid the need to set up translation for every possible page, requiring 4Mb just for tables, a million 4K pages on a 32-bit address bus, MMU tables are arranged hierarchically. They have a 'top level table' managing 128 32-Mb areas, pointing to lower level tables for each 256K section actually used, further divided into the actual pages.

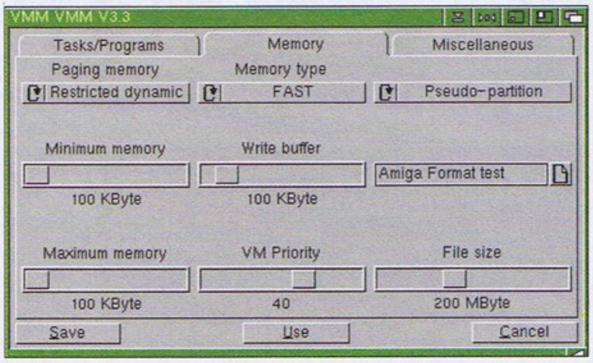
This economy brings the overhead down to a few hundred K, although it may be more if you're using lots of virtual memory. Allow a bit over 1K per logical megabyte for tables, and at least another megabyte of real memory to keep the most recently accessed pages close at hand.

The ATU stores recently used table entries, reducing the need for table look-ups which could otherwise reduce access speed by three-quarters.

Programs that use memory randomly, like ray tracers, list scanners and my own rather contrived *CHURN* (on the CD), are a severe test of ATU efficiency. They run faster if you forgo the powers of the MMU, normally set up by *Enforcer* or *SetPatch*, with help from the 68040 or 68060.library.



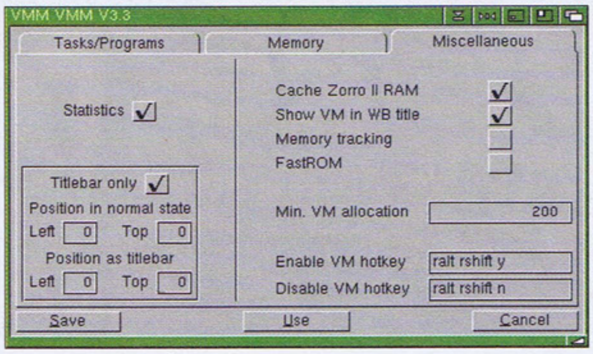
It's vital to warn Virtual Memory code about special-case tasks.



***VMM* has a MUI-based front-end for fine tuning.**

VIRTUAL MEMORY

Virtual memory systems stash pages on a fast drive so they can claim more RAM space than is physically available: up to 2Gb more on a 32-bit Amiga. Amiga virtual memory developments stalled at about the time memory prices crashed and 68060 systems arrived. The commercial *GigaMem* and Shareware



More configuration options in the Shareware *VMM*.

VMM focused on 68020 to 68040 systems, as well as greedy applications like *AdPro*, *Maple* and *Imagine*.

You need a big, fast drive to store pages which have been 'swapped out' to disk. Dedicate a partition to this swap space or expect a long wait when the machine crashes and has to revalidate a partition which mixes normal files and your swap file. Some programs insist on real memory and you get into a knot if device code or MMU hacks are themselves swapped out, so careful configuration is essential.

MMU GOODIES

One popular use for the MMU is remapping Kickstart to faster memory, although this can also be done with special hardware on A3000, 3640 and some phase 5 systems. Associated utilities include *CyberMap*, *FastROM*, *MapROM*, *SoftBoot*, *QuickROM* and *WarpKick*. Some support a choice of Kickstarts loaded from disk, though you must reset to swap between them.

Other tricks require real memory management. *Fusion* uses the MMU to provide the virtual memory some Mac applications expect, or to emulate 24-bit addressing required by older programs.

Shapeshifter's 'MMU refresh' options use ATU table bits to detect screen changes for efficient updating. *Quake* and *VoxelSpace 3D* code benefits in a similar fashion.

Memory management can fake memory in special places, like the $C00000 Ranger expansion required by some old demos. It can also merge Zorro 2 and Zorro 3 fast memory into one chunk, and I'm currently developing emulator engines which simulate memory bank-switching efficiently within an eight-bit processor address space.

PROTECTION

MMUs are handy for users but invaluable for programmers, to the point where it's hard to be confident that any program is 'safe' until you've tried it on a system with memory protection.

MMUs can manage access to special regions like ROM or hardware registers to track custom chip updates. *MonAm* doesn't let you put breakpoints in ROM, but *COP* (dev/debug) lets you mirror ROM to RAM so you can modify and pause inside 'ROM', by the miracle of memory management.

Enforcer and its clone, *CyberGuard*, are the power tools of MMU programming. They report erroneous memory accesses, giving the task name, code offset and even the instruction at fault, pin-pointing errors and making sure the rest of the system is protected.

Cavalier design in the *C* programming language means that programs often fail by jamming values into sensitive low addresses, using structure offsets directly, rather than proper addresses therein. This yields weird bugs, often in apparently unrelated programs, which can be very hard to fix.

It can happen in assembler too, but such errors are generally more obvious to the programmer. Secure languages eliminate pointers, and hence this problem, but at a great cost in efficiency.

You might detect bad pointer arithmetic on systems without an MMU with *MungWall*, which builds a safety zone around each allocation. This can still be useful if you have an MMU, especially if your program tends to stray just beyond the prescribed limits. However, *Enforcer* and *CyberGuard* catch most pointer bugs reliably and efficiently, including wayward reads which might otherwise go unnoticed. Amiga systems don't insist on memory management but few professionals, programmers or power users would like to live without it. AF



WarpUp's *VoxelSpace* demo uses the MMU to boost speed.

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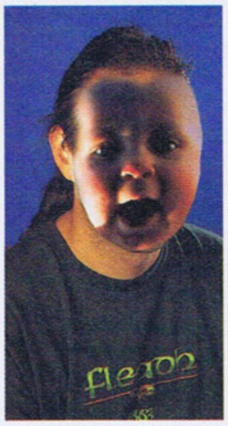
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• Letters about Andy Smith being wrong	Your own game reviews •
• Questions about the Millennium Bug	Suggestions for the Millennium Dome •
• Illegible nonsense	Legible sense •

DORIAN VEITCH?

I went to hospital recently for some x-rays and while I was waiting I noticed some magazines. They had some old *Amiga Format* and *CU Amiga* copies there from 1991 to 1993, so I thought I'd have a quick browse through them to see what had changed over the years.

In a *CU Amiga* issue, I found a pull-out section on video editing and titling that looked quite interesting so I proceeded to read it.

I noticed that most of the pictures were of some old, bearded bloke set against various backdrops. After taking a closer look, I noticed that he looked remarkably like an older version of a certain Nick Veitch!

Lo and behold, the piece was written by 'Old Nick' himself! What happened, Nick? Where are you keeping your time machine hidden, or is it that miracle rejuvenating cream that does it?

Neil Corbett
via email

Ah, the old days. That will have been the Christmas special where I spent most of my Christmas on a rather cold Ballyholme beach being filmed for some amazing chromakey effects. I think the real secret of my amazing youthful appearance is the cleansing, purifying radiation beaming out of my 1960 monitor day after day...

NET NONSENSE

I have been a loyal follower of the Amiga for a number of years, first with an A600, followed by an A1200. With only minor and relatively inexpensive upgrades (hard disk, Blizzard 1220 accelerator with 4Mb RAM, extra floppy disk drive, etc) I have found it more than capable of meeting my needs. These are primarily DTP, word processing and spreadsheets, with some game playing thrown in.

However, for the first time I am experiencing the creaking limitations and age of my system and, even though it pains me to say it, the advantages of the PC. I am referring to my futile and now abortive attempt at getting access to the Internet.

I started by buying a fast 56K modem (V.90 compatible, no less), with good quality net and browser software. I then subscribed to the UK's largest provider, Demon, and was ready to go. Or so I thought. Initially, I had problems configuring my software, so I turned to Demon's 24-hour technical advice line for assistance. Sorry, they replied, we don't give advice for the Amiga, only PCs.

I then turned to the software company, who were very helpful and eventually sorted out my problem. This is it, I thought. Wrong. My first successful logon took approximately 20 minutes, and this was just to the Altavista search page.

Any attempt to go further took just as long and ended up in my running out of patience and terminating the link. I did manage to log on to other sites in around 10 minutes, but if I used it regularly my phone bill would bankrupt me.

It was then suggested that to speed matters up I should buy a Whippet interface, upgrade my processor and add extra RAM, all of which I did (a Blizzard 50MHz 68030 with 16Mb, to be precise). And the result? No noticeable difference whatsoever.

I still want to get on the Internet so I'm now looking at basic PCs for this purpose, while still using my Amiga for DTP and so on. The warning to other Amiga users wishing to get on the Internet is simple, and one which I dearly wish someone had given me – don't waste your money.

George Drever
Orkney

There are several things to say here. Firstly, it is true that Demon, like some other ISPs, do not provide technical help for the Amiga. There are also a number of companies that do, as you will have seen from our recent feature on the subject.

Secondly, if you have a Whippet and a fast modem, I don't think that you are going to get faster access from a PC. The problems causing the poor speed of your link are more likely to be due to traffic at the ISPs local node, traffic at the sites in question or a poor quality phone connection between you and your ISP.

We use Amigas and Macs in our office for accessing the Internet and, if anything, the Amiga's are faster, especially since Ibrowse is a lot more efficient than the common Mac web browsers. I don't think your problem lies with your Amiga.

I'm sorry you've had this problem, but I'm even more sorry that you think all your problems will be magically solved by buying a PC.

For all the information you need about connecting to the net, see *AF115*.



HAPPY CUSTOMER

I've bought several bits and pieces for my Amigas from several different companies over the past eight years. In May this year I bought a 3.2Gb Maxtor hard drive from Golden Image and,

Continued overleaf ➡

unfortunately, the drive developed a problem that I couldn't overcome.

I phoned Golden Image and explained everything to them and was told to send the drive back for them to have a look at. I did this on Tuesday, September 8th, and I received a brand new drive by return of post. It was back in my A1200 by the Saturday.

Golden Image were extremely polite and I even had a chat to their engineer about Amigas. They gave me a few decent tips about putting the whole of my Amiga into a tower, instead of just using a tower as a home for all my drives.

I'm hoping you'll give Golden Image a mention in the magazine as I think their prices are realistic and their after sales service is second to none. They'll definitely get all my orders in the future.

R. G. Butler
Norwich

I'm sure that quite a lot of you are happy with the service you have received from the major mail order companies serving the Amiga market.

BEWITCHED

What's going on? Am I some sort of jinx? What am I talking about? Well, all those many years ago I got a Commodore 64 for Christmas (wow! 64K of RAM, give or take the 26K which was taken up by the operating system). I then started adding to it and got a dot matrix printer (which sounds like someone getting an electric shock while printing) and a 5.25" disk drive (that was nearly as big as the 64 itself!). Then, wham! The 64 market died.

I recently bought an A500, a good machine but, alas, I decided it wasn't feasible to upgrade it so I bought an A1200. What a machine! I've been upgrading my system and now have a 68040/25, 810Mb hard drive and 32x speed CD-ROM drive. Next on my list is more memory and what happens? *CU Amiga* print their last ever issue. Deja vu? Is this the start of things to come? I think it's me.

Please, please, please keep printing your wonderful magazine. I don't care if you have to put the price up a little to get a better profit. I know you don't really do it for the money but I'd pay a little extra to keep *AF* on the shelves. In fact, I'll be subscribing shortly.

I'm staying with the Amiga (I did it with the 64 and I'll do it again) and I'm also learning to program in *PASCAL* and *C* in the hope of eventually giving some programming support back to the Amiga. Also, could you print my address in the hope that fellow Amiga users will contact me because I feel all alone here in St. Helens? I only hope that I'm not.

One last question. Do you or any of your readers out there know what the slot to the left of the mouse port on the A1200 (as you look from the back) is for? Is it a secret biscuit compartment for when users are hungry?

Andrew Gaskell
25 Whiteside Road
Haydock
St. Helens
Merseyside
WA11 0XN

It is you. Please don't write to us again.

...AND ANOTHER

I would be grateful if you could send something nice to Mr. Ian Jenkins of Effigy Software, or at least say something nice about him.

Even while being unable to trade through problems with distributors and exporting, as well as various legal difficulties, Mr. Jenkins has found the time to respond to my *Pinball Prelude* problems, even though I wasn't entitled to any help at all – the game was bought ages ago and I couldn't produce a receipt. Mr. Jenkins sent me a set of replacement disks, enabling me to diagnose a problem with my hard disk.

I think that professional and quick support are what make Amiga companies stand apart from the proponents of other platforms, especially when it's provided free and on a goodwill gesture basis.

Examples like this need to be held up for other, larger companies to see.

T. A. Kelsall
Northallerton

See, told you...



Another big thank you goes out to Effigy Software's Ian Jenkins, creator of *Pinball Prelude*.

WEIRD NEWS

I recently read a copy of Weird Science's new mail shot and I was interested to read about a new "Amiga" from Weird Science and Blittersoft. As I read, I was surprised to see that this new Amiga was really a nasty PC and Macintrash hybrid. The back stabbing traitors at Weird Science have unveiled what they seem to think is an Amiga owner's dream machine. What a bunch of idiots!

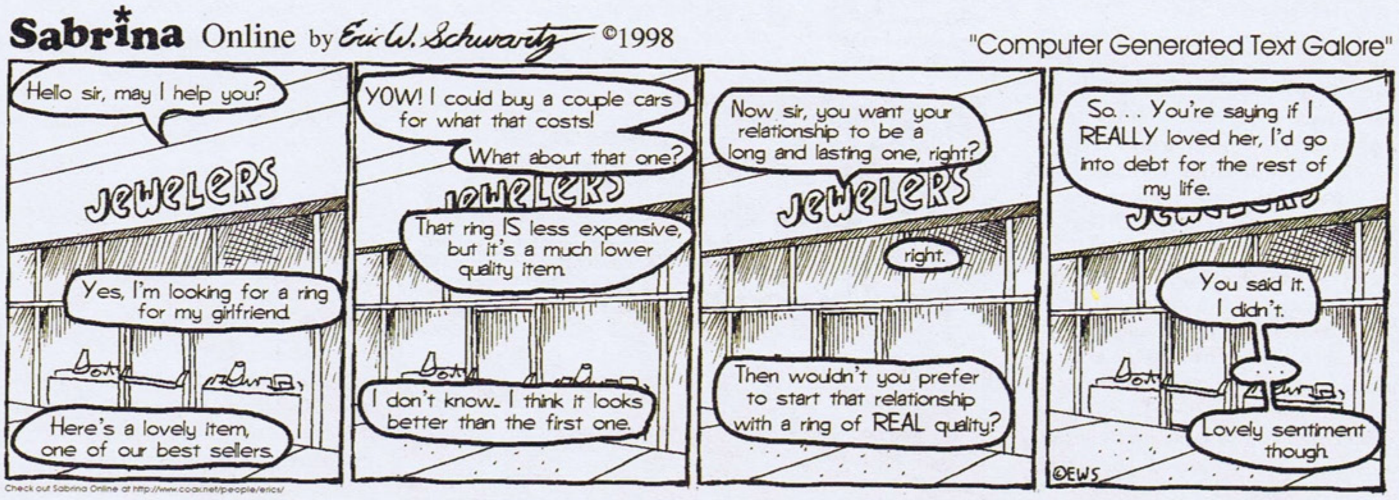
I think that this "Amiga" is a stupid idea. For a start, they have only unveiled the EZPC Tower (sorry Eyetech) with a different name and optional Macintosh system and a few extras (modem, etc).

Please encourage your readers not to buy this new "Amiga" (which advertises its main processor as an Intel Pentium II). It even has an inferior graphics capability to the proposed Amiga (400 million pixels to one million pixels). It obviously has an inferior main operating system.

I know 18 months is a long time to wait, but as they say in the Guinness adverts, the best things come to those who wait. If we wait, we'll have a very fast computer with very slick graphics and a true Amiga OS, rather than second-rate rubbish with a stupid name (CERB-what?).

Of course, if you think 18 months is too long, perhaps you would have preferred Gateway to have announced that they were abandoning the Amiga.

Ross Whiteford
Abernethy



Check out Sabrina Online at http://www.coax.net/people/erics/

I haven't seen any details on this new tower from Weird Science, so I can't really comment about that yet, but we will obviously be looking in to it.

I do agree with your other comments though – it is certainly better to wait a bit longer and get something worth waiting for.



The best things in life are worth waiting for...

2000AF

As a reader of *AF* since the early nineties and a current subscriber, I would like to congratulate you for consistently producing the best Amiga magazine over the years.

Now that, sadly, the old enemy is no more, it is left to *AF* to follow in the footsteps of *Your Sinclair, Commodore Format, Amstrad Action* and *ST Format* as sole defender of the machine you cover.

However, unlike the above magazines, *Amiga Format* is covering a machine that still has a future, backed by multi-billion dollar Gateway, who are committed to launching a superchip Amiga in 12-18 months, backed up by a multi-million dollar marketing and advertising campaign (or so they say, at least).

I now give a plea to the powers that be at Future to think about the future, to keep *AF* going, at least until the new super Amiga arrives, even if by that time *AF* is reduced to 96 pages, two thirds glossy, one third the type at the back of *CU Amiga* and priced at £4.75/£6.25.

Surely it would be pointless for Future to close *AF* in, say, 10 month's time, only to relaunch it again four or five months after that. In the past, whenever a new machine has been launched, Future have more or less simultaneously launched a new magazine to support it, even before a sizeable market had been established for it.

Anyway, the best of luck to everyone at *AF* for the future, and who knows? In two year's time, *AF* might be thicker, cheaper and have some competitors again, and will have bridged the gap between the old Amiga and the new Amiga.

Finally, any chance of you giving away some Amiga stickers like *CU Amiga* did?

Andrew Marshall
Liverpool

As we have said since the closure of CU, there are no plans to close Amiga Format any time soon. It remains a profitable title and we all sincerely hope that it will remain so, certainly long enough to see the arrival of the new Amiga.

Finally, I doubt it. We never liked those stickers. Cloanto's Boing stickers were much better, and perhaps in the future we may be able to do something like that.

A WAITING GAME

Like most Amiga enthusiasts, I was over the moon to finally hear some interest by Amiga International in the future of the machine which goes beyond mere rhetoric. Apparently.

After spending megabucks on the company and doing nothing more publicly than a few licensing agreements and leading phase 5 up the garden path with perceived support for PowerPC, here was what we'd all been waiting for since the demise of Commodore. However, this euphoria quickly turned to frustration at the time we would have to wait. Come on guys, what have you been doing with the company for the last 15 months?

Leaving aside the technical specs of the machine, which must be subject to variance given the technological advances to be made in this time, AI still have a full-time job keeping the remaining Amiga community on board. They must not become aloof from us, as Commodore did, but instead must make regular progress reports public.

The first page I turn to after *Format* drops through my letter box is the news page. Okay, it's unreasonable to expect huge news releases every month, but since the original announcement things have been a bit sparse in this department. This allows my paranoia about the machine to rise to the surface. Matters aren't helped by my two sons who are pressing for access to certain reference CD-ROMs and my own desire to be able to use the shelves of software that are available in your average high street software shop for the other format.

Gateway admitted they didn't realise the support the Amiga had when they bought the company, but they must realise the benefits in keeping us optimistic about its future.

As well as the actual machine, they should also be looking at an early stage about how they're going to market it.

They also need some groundbreaking software at the launch to demonstrate its capabilities if it is to attract the attention of the punters and these are things they should be doing now. Are they?

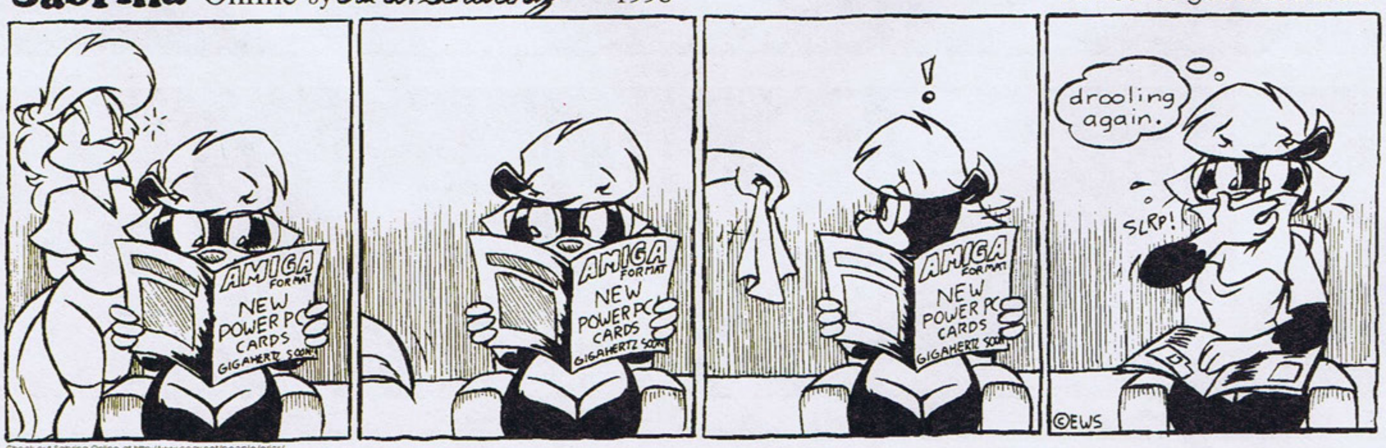
They must be the first to admit that launching a new computer against the huge monopoly of the WinTel alliance will be tough and they're going to need as many of us old guard as possible as a jump start. However, it's possible to be successful with the right strategies and even Microsoft can go the way of the Roman Empire, the Japanese economy and Bill Clinton, with or without the help of cigars.

So come on AI, don't keep us waiting too long for developments as each one of us who changes formats in these lean times is a potential customer lost to the new Amiga.

Steve Hopkirk
Sunderland

Well, as you probably realise by now, we print what we know and what we don't know we try to find out. Apart from the details already released, Amiga Inc. have been very tight-lipped about what's going on. Because they work very closely and in such a small team, it is also very difficult to get hold of any leaked information. I do think that they're doing the right thing in many ways, though – there's no point announcing things until you're certain about them.

Sabrina Online by Eric W. Schwartz ©1998 "Almost as good as it looks"



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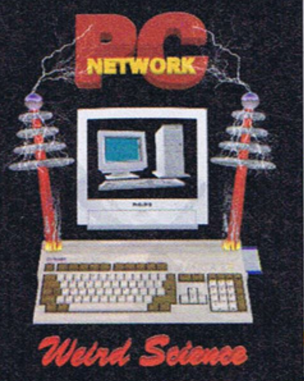
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Quad speed CD-ROM (Mitsumi FX400D) IDE, no cable, £20. 16Mb 72-pin SIMM, £20, including postage. Also, boxed games for A500/A1200. Assorted prices. ☎ Martin 0181 7420294.

4-way buffered interface for A1200. Needs cables. With IDEfix software, £20. Also, 24-pin dot matrix colour printer, £60 and 8Mb SIMM, £6. Buyer collects or pays postage. ☎ 01772 337532.

Eyetech 8x speed CD-ROM (external) with buffered interface, cables, software, as new, £60. Imagine 5, £35; Lightwave 3.5, £50; Wordworth 7, £25; TurboPrint 6, £20; 250Mb hard drive (3.5"), £50. ☎ 01405 860798 any time.

Citizen ABC printer, £50. Also Foundation CD game, £12 or swap for good CD game. ☎ 01274 616884.

Dungeon Master II £30, Syndicate £10, UFO £10, Coala, DawnPatrol, Xtreme Racing, Overlord and Space Hulk, £10 each. Sim City 2000 £20, Fears £5, FOG £5, and many, many more. ☎ 01502 732248.

A1200T, '060/50 32Mb, 512Mb HD, 2x HDD, 18x CD-ROM, ZII video slot, Buddha Catweasel card, WB3.1, Mac+ PC emulation, no monitor, £450. ☎ 01737 219764.

200W power supply with instructions to fit old lead, £30 including P&P. Internal fan for A1200 desktop or tower, £10 including P&P. ☎ 0411 715548.

A4000/40, 16Mb. Imagica, professional image engine/paint pack for video. Sony RGB transcoder, YR1000 plus switch box, 16 speed CD-ROM, Canon camera, VC30, Ad Pro, Wordworth, many extras. Cost £5,700, sell for £2,900. ☎ 01592 882819.

Goliath power pack, £35. Videomaster AGA (real-time video digitiser), hardware, software, manual, fits PCMCIA slot of A600/A1200. £35. ☎ 0117 9613509.

A1200, 6Mb 2x CD-ROM, 1.2Gb hard drive, 3 external disk drives, colour monitor, b/w printer, 50+ boxed games, eight cover CDs, £200 ono or swap for best PlayStation offered plus cash. ☎ 0161 6549807.

A500+, A501 memory expansion, 1084S monitor, A570 CD-ROM drive, external drive, two joysticks, new mouse, magazines, 30 software titles, £350. Mr. P. A. Day, 25 Trevithick Drive, Temple Hill, Dartford, Kent, DA1 5TH.

CD³² and SX-1, keyboard, disk drive, 10Mb memory, 120Mb hard disk, Philips monitor, disks, £200. A500+, 2Mb, monitor, £50. Microvitec 1438 multisync monitor, £130. Power hand scanner, £30. ☎ 01732 460387.

RocTec external FDD, £20; RocGen Plus genlock for A500, A1000, A2000 (not AGA), £80 including postage. ☎ John Hudson 01332 573074.

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A4000 16Mb '040, complete with hard disk and Picasso II graphics card, loads of professional software. Also with CD-ROM and spare disk drive, £650. ☎ 01249 890192. Buyer collects (Lyneham).

CD32 with two controllers, 20+ games, including SWOS and Network CD and cables. Boxed, £75. Other 1200 games for sale, CDs and disks. ☎ Richard 0181 4523389.

US Robotics 28800 Sportster fax modem, boxed with all cables, manual and software, £25 including postage. Sale needed to finance upgrade. ☎ George Aldridge 01573 224632 or email gwa@kelso.u-net.com.

A500 parts/A570 CD-ROM drive, boxed, complete, £60 ono. Plus Supra external 2Mb accelerator, £35. Philips Mk II CM8833 colour stereo monitor, fits any Amiga, £60 ono. 2 external floppy drives, £15 each. You pay P&P. ☎ Les 01744 733984.

A1200, 10Mb RAM, 500Mb hard drive, 4x CD-ROM multichanger (four CDs in drive at once). Philips monitor, loads of software and games, extra disk drive, £400 ono. ☎ 01422 347071 (Halifax).

CD32 with 17 games, mouse, mouse mat and joypad, £100. CD32-to-Amiga link cable plus software, £15. A1200 keyboard, £15. A1200 internal floppy drive, £15. A1200 casing, £10. ☎ 01703 347233.

Infinitiv 1300 1.2Gb HD, 10x CD-ROM, M1438S monitor, 68030, 10Mb RAM, 28000 fax modem, installed software, £550 ono. Amiga Format CDs, numbers two to 30, software, etc. Send SAE to D. Ellis, 7 Chaucer Crescent, Kidderminster, DY10 3XF. Email mickey@enterprise.net.

WANTED

V-Lab Motion card, plus Movieshop software. Cash waiting. Email shaunwaller@enterprise.net or ☎ Shaun 01472 821299.

A590 hard disk drive for an A500+ that I'm desperately trying to upgrade. Will pay postage and packing. ☎ 01389 763803 after 4pm.

Maple V rel. 3 needed by student. Email your offer to a.f.rovers@stud.tue.nl.

IDE accelerator card for A1200, bubblejet printer and driver, external floppy, hard drive and loads of advice. Write to Georgina and Michael, 2A-25 Grove Road, Eastbourne, East Sussex, BN21 4TT.

Action Replay cartridge for A1200. ☎ 01302 711125.

SX-1 expansion module urgently wanted, with keyboard. ☎ 0121 3539754 after 5pm, ask for William. Will pay postage if necessary.

Superfrog game by Team 17 (original only). ☎ Mark 01332 361729.

Could anyone supply me with OctaMED Soundstudio on disk? I will pay £10. ☎ Anthony 01474 706114.

Deluxe Music Construction Set 2. I have the disabled version from the *AF50* coverdisk. I'd like to obtain a full version. Can anyone help? ☎ Alf Denham 01275 845173, any time.

Amiga 5.25" drive, external. ☎ Keith 01322 359720 (evenings).

Dune II (instructions not necessary), Wings, Voyages of Discovery, On the Ball League Edition, all for A1200. Willing to pay up to £7 each. ☎ 01703 326826.

PC Task or PCX emulators. Up to date versions, will pay for a good deal. ☎ 01702 714174.

SIMMS for GVP '030 board. Any size considered, 4Mb, 8Mb, 16Mb. Will pay good price. Would consider full board. ☎ Clive 01425 278401.

PERSONAL

Also see the AmigaAngels document on our CD.

Amiga free helpline needs helpers. If you're interested in helping miggy users, ☎ Terry 01709 814296. My Amiga also needs go faster stripes so 22 original games for sale too. £2-£6.50 or swap.

A500 users: I want to trade games or programs. Bill Stefanis, Ragavi 53-55, 11474, Athens, Greece.

Amiga helpline, most problems solved. Send a cheque/PO for one pound, payable to J. Seeney, plus SAE, to: J. Seeney, Amiga Helpline, 6 Station Street, Wakefield, West Yorks, WF1 5AF. Any problems welcome!

Amiga contacts wanted, any age. I have an A1200 '030. I'm trying to set up an Amiga club. Stewart Anderson, 18 Foster Avenue, Silsden, West Yorkshire, BD20 9LG. Please support me.

Adult penpals in Europe, into Amiga art and music. No pirates! PD disks okay. Sample swapping. Any female Amigans? Ms. Vivian McAlexander, 520 Harold Drive, Socorro, New Mexico, 87801, USA.

USER GROUPS

User group ads will be printed for three issues.

New Northern Dales user group. Would anyone interested in joining/participating in a new group in the Catterick/Rickmond area contact Ian Aisbitt. Email iana@zetnet.co.uk or ☎ 01677 4505646 (between 9-5, Monday to Friday).

XCAD users group want to attract as many XCAD users as possible. Interested in joining and receiving the "XCAD User" newsletter and tutorials? ☎ Tony 01662 250320 after 6pm.

Are you interested in helping other Amiga users? Are you stuck on a particular aspect of the Amiga (hardware or software)? If so, ☎ Terry 01709 814296 to join the free Amiga helpline.

Edinburgh Amiga Club. Meets every second Tuesday at Gilmerton Miners Welfare Club, 7pm – 11pm. Tutorials for beginners, information at all levels, hardware and software help. Email jim@eac.ednet.co.uk.

X Zone BBS, West Berkshire's coolest BBS with nearly 3,000 files online, pictures, MODs, HD installers, utils and more. ☎ 01635 820590 now (6pm to 1am, 33.6K BPS).

Maidenhead Computer Club. One of Berkshire's longest established clubs, new members welcome. Meet every second Thursday of the month, 7.45pm, Community Centre, Highfield Lane, Cox Green, Maidenhead. ☎ Alan Everett 0118 9453420.

Coventry and Warwickshire Commodore Computer Club. Meet first Wednesday of every month at Earlsdon Methodist Church, Coventry, 8pm – 10pm. ☎ Will Light 01203 413511 or Ed Freeman 01788 812138. Email luke.stowe@ukonline.co.uk

Amiga enthusiasts wanted to join forces against Amiga-hating Channel 4 Teletext page, Digitiser. To join, send SAE to Kill Digitiser, 81 Doncaster Road, Selby, North Yorks, YO8 9BU.

East Lanc's Amiga Club. Free membership. We are willing to help you with any problems you have. ☎ Mark 01254 728115 or write to 70 Tintern Crescent, Blackburn, Lancs, BB1 5RY.

Deal Amiga Club. Meet every Friday, 7pm – 11pm, St. Johns Ambulance Hall, Mill Hill, Deal. ☎ 01304 367992 / 379857 or email amiga.club@centrenet.co.uk.

New user group starting up for programmers. If you're interested in Basic, Amos, C or Java, ☎ Ross 01705 645311 (afternoons or evenings).

Online? Then visit my revamped site at http://www.shepherd.home.ml.org for loads of Amiga news, downloads, charts and Star Trek and football info. We need your input.

New user group starting up in Bodmin, Newquay, St. Austell and Truro. ☎ Clive on 01726 822061 after 7.30pm on weekdays, any time on weekends.

Kickstart, Surrey Amiga user group. Meets last Monday of month in Ottershaw, Surrey. All Amiga users welcome for fun, help and general Amiga usage, tutorials and Amiga surgery. ☎ Rob Gilbert 01932 562354 or email gilbia@arrakis.u-net.com.

Power Amiga – New Amiga group in Portsmouth, for Internet, video graphics, scanning, digitising, word processing, desktop publishing, animations, CD-ROM, games, support, etc. Monthly newsletter. ☎ Richard 01705 829541.

Anyone interested in opening a club in the Plymouth and Sounding area to swap and chat in, helping each other? ☎ 01752 268386 or 0958 910296.

Are there any Amiga users in the east Manchester area – Ashton, Hyde, Stockport – who want to start a user group? Is there anyone out there? ☎ Paul 0161 3686433.

Amiga Design Workshop, UK. Anyone welcome. Monthly newsletter, run by readers, database, stored lists of animations, art, music, etc, which are sent to software houses/websites, competitions, resource panel which offers support and equipment. ☎ 01892 870483 (outside office hours) or write to: 2 Morden Cottages, Chiddingstone, Causeway, Tonbridge, TN11 8JB.

The Gallery

ON THIS MONTH'S CD

AFCD33:-ReaderStuff-/-Gallery-

This month **Ben Vost** presides over a truly bumper selection of your finest work.

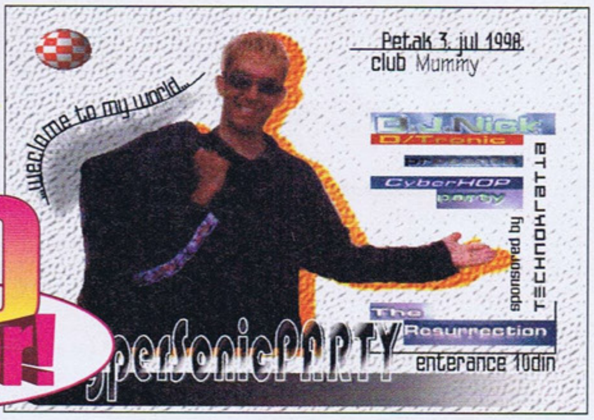
CD COMPILATION, SUPERSONIK DJ by DJ Nick

Nick's entries to the picture element of the Gallery might not seem that impressive, particularly compared with John James' Speeder bike. However, it's his huge Mpeg animation that clinches it for him.

He originally sent us a CD with a 331Mb AVI file that was created on the Amiga and put together on a PC with a special video card. We've made it into an MPEG in order to have it fit on our CD, but it's still hard to see it effectively on an Amiga.



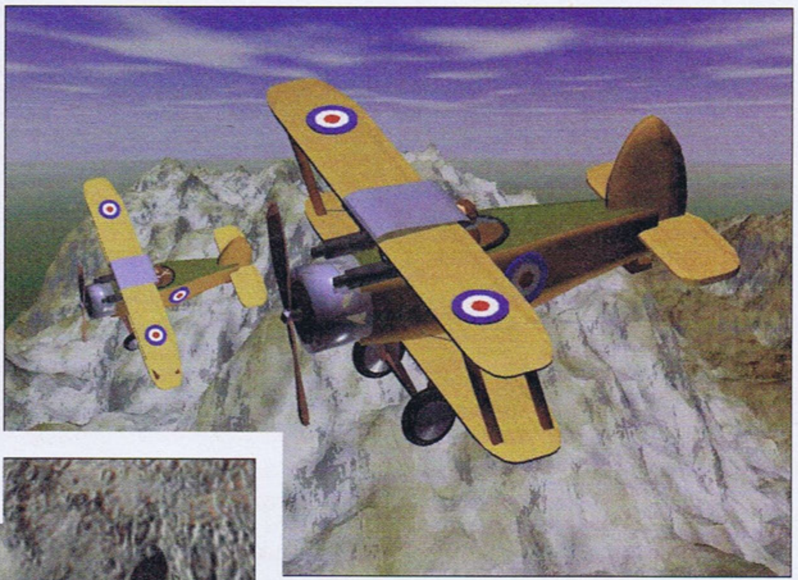
£50 AF Winner!





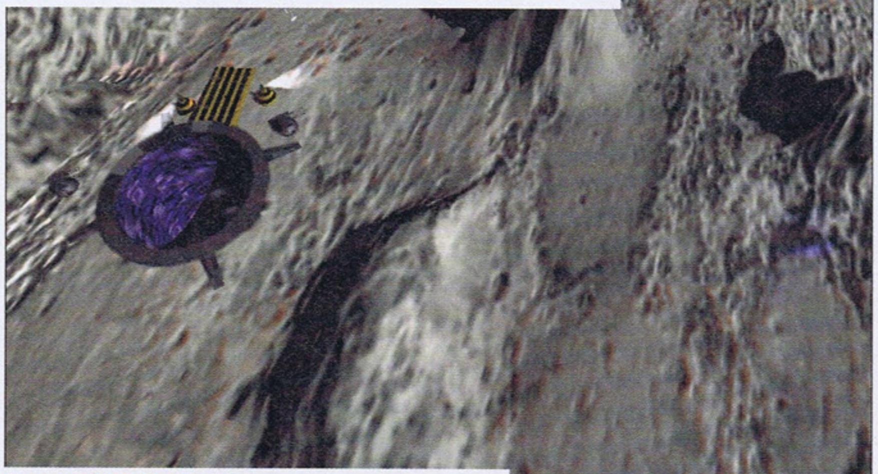
Leaves by Daniel Pimley

Daniel's mono scan of leaves has been beautifully treated in *PPaint* to give it that slightly ethereal look. Lovely.



Biplane 2 by Chris Edwards

Chris has some nice renders on the CD but he needs to learn some things. One is how to map images correctly, using cylindrical and spherical mapping, and the other is how to model! Let's see some pictures from you that include models you've made, Chris.



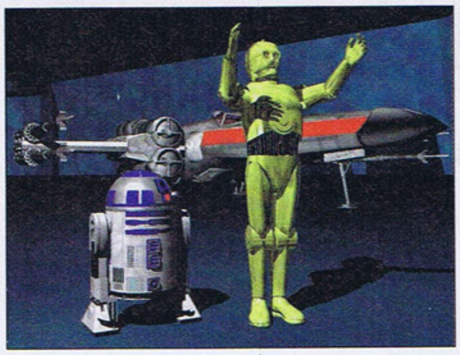
Moon by Jordan Cadby

Jordan rendered this minimal image in *Cinema 4D* using a relief map for the mountainous terrain. We liked the suggestion that there's activity below the surface of the moon. Spooky...



San Francisco By Night by Ogy

Ogy's fondest wish is that he could get *Lightwave* and *ImageFX*, but it looks like he's doing a fine job with *PPaint* to us.





C3PO, R2, Speedbike by John James
Beautifully modelled and rendered images done in *Lightwave*. They would certainly have won the Gallery prize this month if it wasn't for DJ Nick and his animation.

Night Of Tranquillity by Mikael Drugge
Mikael has supplied us with several rendered images and we liked this one best. His use of lighting in *Imagine* has left this with a great atmosphere and we look forward to seeing more of his work.





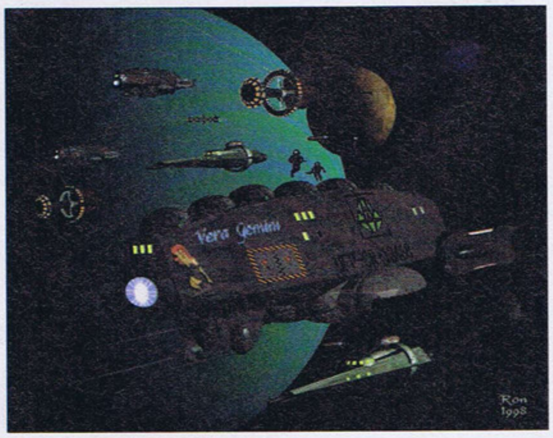
TripleStar by Kevin Cullen
More glorious hand-drawn artwork by Kevin Cullen. Kevin draws in pencil, scans and then colours his work on computer, making it feel very rich.

SUBMISSIONS

Send your Gallery artwork to AFCD Submissions, Amiga Format, 30 Monmouth Street, Bath, Somerset, BA1 2BW, or email them to afcdsubs@futurenet.co.uk. Please don't send any files over 1Mb in size. Also see the submissions advice file on the CD for further options.



P.C.C.V by Nuno Gordinho
PCCV stands for Police Chaos Control Vehicle according to Nuno and boy, do we love images this big. You may not have the chip RAM necessary to view this on your screen so halve it in size.



HighGuard by Ron Sherrington
Another great rendered image of spaceships. It's unusual to hear a reference to Traveller these days, too. It's pretty dark but other than that, it's also very nice.



Serious AMIGA FORMAT disk



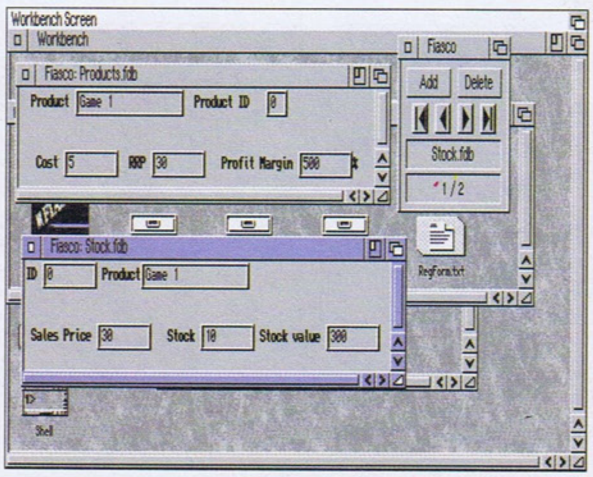
This fantastic database is back and it's better than ever. **Dave Taylor** investigates the powerful relational capabilities of this Amiga classic.

Fiasco2.2

Since we last included *Fiasco* on a coverdisk, things have changed substantially. The author has developed the feature set significantly and it now includes the ability to pull data from another database on the fly.

This doesn't mean importing data from another form of database, but actually having two databases that interact during runtime. *Fiasco* also now supports programming for functions so that you can have "virtual" fields, as you can in a spreadsheet, that don't have data input by the user. Instead, the programs works out the fields from a formula based on other "real" fields.

Let's see how you can use these features to build a powerful, integrated database. We are actually going to create two databases so they can interact with each other. The first is going to be a database of products that our new company, "AF Enterprises", make.



Within a few minutes you can follow our tutorial and design and build two databases which interact. The second database actually only has two live fields. All the rest are relations and calculations.

The second is going to be an inventory database that pulls the names of the products and their values in and calculates the value of the stock. Much of the second database will actually be pulling data from the first one so that minimum upkeep is required.

DESIGN TIME

Before you can get involved in all the nifty and cool things, you need to design your own database. *Fiasco* makes this easy. Simply start the program and you'll find a new database with no fields or entries waiting for you; a blank sheet waiting for your masterpiece.

> "Much of the second database will actually be pulling data from the first one so that minimum upkeep is required."

Go to the Control menu and swap to Mask mode, or press Ctrl-F2 on the keyboard. This is the design mode where we layout the fields of the database. You'll see that the floating toolbar changes from the one used to add records to the database to a design one, allowing you to add fields. You can also add fields from the Fields menu.

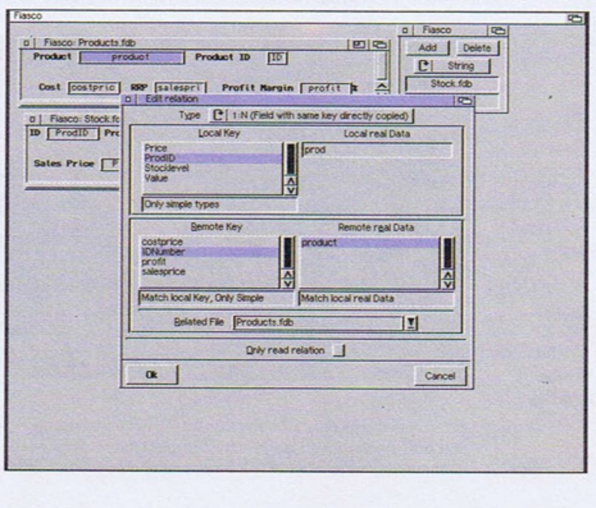
The first entry we need to make, strangely, is not a real field; it's a label. Change the field type to text and click on Add. A small requestor will appear which asks for you to type the text you want to appear.

Enter "Product" and change the style to Bold. Then press <return>. The text appears and you can click on it and drag it around the database form to be placed where you want it. We want it at the top left, so it's fine.

Now add a new field of the String type. A String field is one that will accept text entries when you add a record. When you click on Add, a more complex requestor will appear. All the defaults are fine for this purpose, though it is worth noting now that you can enter default entries that will appear when a new record is added. This is also where you can define virtual fields and add formulae in the Programming section.

The only thing you do need to enter is a unique field name. This is the name that the database uses to identify the field when that field is requested by a different field – the name is not displayed at runtime. Enter "Product" and then OK the requestor.

Make sure the field is positioned next to its caption and then add a new Text field to be called "Product ID". Now add an Integer field. Integer fields accept numbers and, in this case, the product ID is going to the key identifier that will be used in the



The Edit Relations requestor requires you to pick a database to refer to, and then you need to match up the Key identifiers for a field and the data field you want from the remote record. You can even have different fields pulling data from different databases.

second database to pull in data from here. In order to create any relational database you will always need at least two fields on a database form, one of which needs to be an identifier field. On the requestor for the Integer, enter the name “IDNumber”.

FORMULAIC RESPONSE

Now add a Text field called “Cost”, with an Integer field called “Costprice”, then a Text field called “RRP” and an Integer field called “Salesprice”. Now enter a Text field called “Profit Margin” and an Integer field called “Profit”.

This is going to be our first virtual field and it will calculate how much we make on the cost price when we sell an item. In the requestor, tick the Virtual Field check box. In the Programming section of the requestor you'll see a button with an arrow on it to denote that a further requestor is available.

Click this and the formula editor will open. If the requestors you've been opening have opened on different screens, you'll have to do some swapping of screens at this point. Incidentally, a solution to this is to go to the Setting menu and change the Display type to a custom screen and let everything appear on the same screen.

Now you can either type in your formula or make life easy on yourself and click on the functions you need. Our formula is simple: (salesprice-costprice)/costprice*100. The maths is easy. The part in the brackets is executed first – calculate the profit made by subtracting the number in the costprice field from the number in the salesprice field.

That number is then divided by the costprice to see what fraction of the original price is profit. This is multiplied by 100 to create a percentage.

Click on OK in the formula editor, and then OK in the field requestor. Save the database under the name “Products”. Change back to the Record mode (press Ctrl-F1) and we need to enter our sample data. Just make it up.

RELATIONSHIPS

Now we need to create a new database. Again, we need to do the design first. Create the following fields: “ID” (Text), “ProdID” (Integer), “Product” (Text), “Prod” (String), “Sales Price” (Text), “Price” (Integer), “Stock” (Text), “Stocklevel” (Integer), “Stock Value” (Text) and finally “Value” (Integer).

The last field, “Value”, again needs to be a virtual field with a formula. The formula you need to enter is: Price*Stocklevel. Save the database in the same directory as the first one and call it Stock.

Now it's time to get some relationships going. Click once on the ProdID field and then choose Edit Relation from the Field menu (Right Amiga-Shift-8). A new requestor will appear. At the bottom is a button to open a new requestor to choose the database the data is to be pulled from.

Select the Products database we've just created. When it is chosen, you'll see all the fields appear in parts of the requestor. What you need to select in the top Local Key part is the ProdID field.

This is the field in the database you are editing that will be matched to the field in the remote database (Products) in order to bring across the other data. In Remote Key below, you need to choose IDNumber. In the Remote Real Data the only choice should be Product.

Now the database will match up these two keys and pull across the data from the Product field in the Products database and put it in the Prod field in this database whenever required, according to the Product ID number.

Now edit the relation for Price. Choose the Products database as the Related file. Again, match the ProdID to the IDNumber, choose salesprice for the Remote Real Data and this is the database finished. Go to the Record mode and add a record. All you need to add is the product ID number and the stock level. The rest of the data will be pulled across, based on the Product ID and the value of the stock calculated, based on that information.

This just scratches the surface of the power of *Fiasco* and doesn't take in many of the fields and features available, but it does show how a powerful database set can be built quickly. Thankfully, there's a huge AmigaGuide in the documentation directory which details all the features in great depth.

Don't forget that this program is Shareware, so register it if you use it so that the author continues development. Details are in the documentation and on the reminder that appears when you start the program.

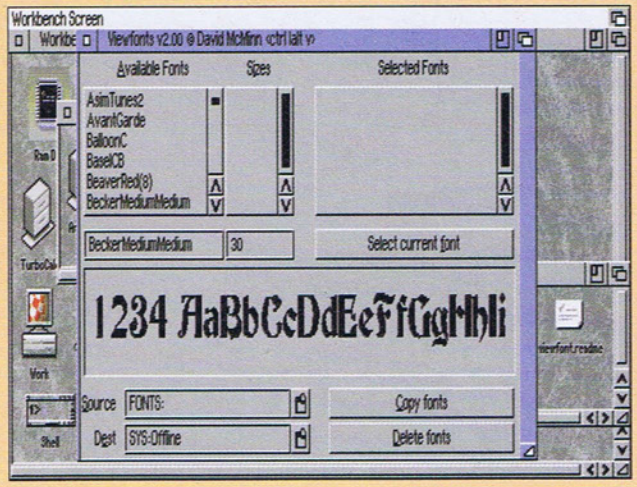
OTHER UTILITIES

POOLMEM

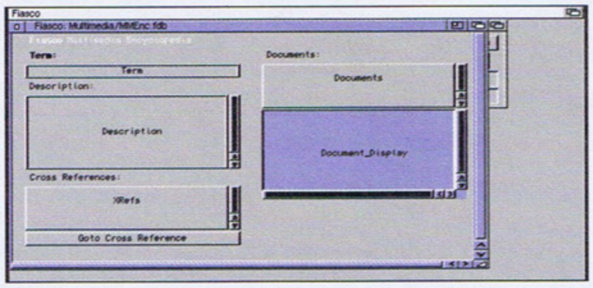
Also on this disk is a set of utilities for correcting the RAM display and adding in a few new features to Workbench.

VIEW FONTS 2

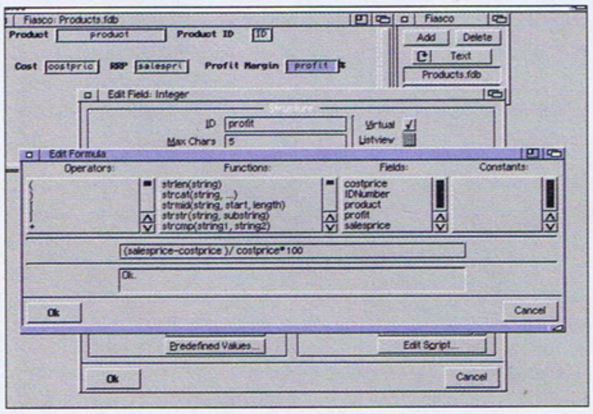
This is a simple utility designed to make it easier for you to see all the fonts you have installed and what they look like. You can then move the ones you don't need to a different folder. The program can copy the fonts from the folder or delete the font for you.



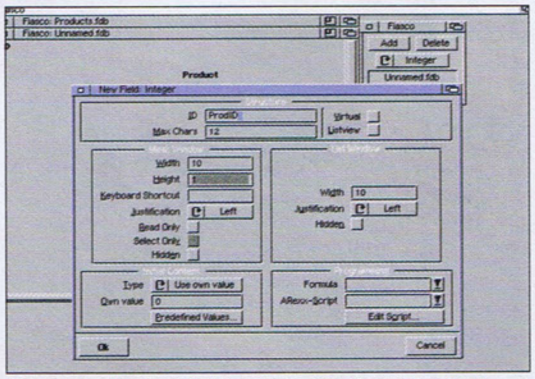
Make it easy on yourself. *View Fonts 2* can show all your fonts and make it easy for you to select ones to move or delete by batch.



With the *Fiasco* package, you'll find example files that show off complex relations and advanced fields like DataTypes.



The formula editor allows you to type in directly or select the elements of the formula from the individual lists. Included are all the fields in the database so you can use the contents of a field to work with.



When you add a new field to the design of your database, you'll see a requestor like this one. It is adding in the Key identifier, an Integer field that will be identical in both databases, and it's used to match up records.

Games disk

AMIGA FORMAT





It's almost a year ago since we featured an up and coming shoot-em-up. One name change and masses of work later, Dave Taylor is very pleased to be blasting his way through a full new level.

GunBee F-99

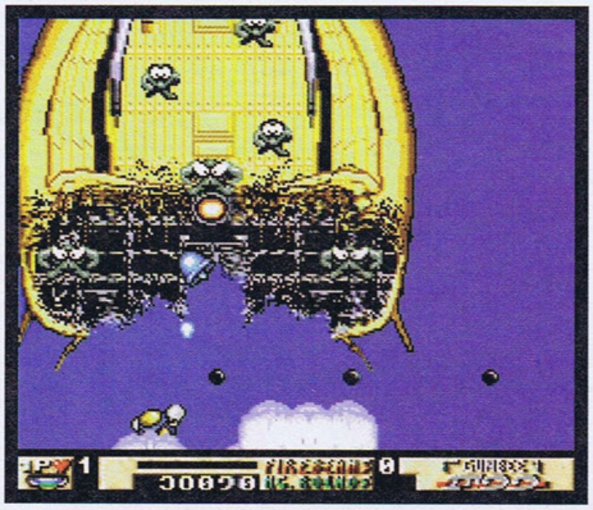


Maybe it's the ridiculous number of hours spent on *Xenon* and its sequel, or maybe it's premature senility, but I can't resist a good shoot-em-up. None of this new fangled, 3D, first person perspective rubbish. I want to strap myself into a battered fighter and set out to save the world by blasting away wave after wave of alien scum.

Some eleven months ago it looked as if my dream was going to come true, when I came across a game called *AmiBee* which had a full demo of level one. Things then went quiet until this brand new demo arrived.

Featuring level two, the game has undergone some major changes with new enemies and graphics and even a new name.

GunBee remains the same tight, high action blaster as before, and manages to pack the high quality graphics and gameplay of this demo onto this single disk. You need an AGA machine to play the game and ideally a fast processor and some extra RAM. As the coverdisk boots the game though it should be easy enough to play on anything from a bog standard A1200 upwards.



Ah harr! Avast there, ye gun-totin' bee thing!

> "It's easy to get caught by a stray shot when you're tied up trying to collect a bell, so be very careful."

GETTING STARTED

When the game starts loading you'll come to a selection screen for the game. This is not the Start screen, it's the one that determines the game's preferences. Using the joystick or keyboard arrow keys to move up and down through the menu, use left and right to choose the screenmode and the input mode. If you're in the UK you'll probably need to change the screenmode to PAL.

You can also change the input to keyboard and you can even change the language. When you're ready, press fire or the Alt button.

The game will continue to load and will do a quick picture show of intro screenshots and game pictures before going to a quick overview. You can press Fire or Alt again at any point to skip to the Start screen.

From the Start screen you can begin the game or go to the Options menu. In the Options menu you can turn the music off and change the gameplay mode from Honey mode to Story mode. Honey mode is the easier of the two and is intended as a trainer, though to be honest, it's still quite difficult. Story mode is the full monty and you'd better be ready for it.

The Honey mode gives you five lives and five power beam shots, which are accessed by holding down the fire button. These powered up shots will devastate any enemies in their path, but with such a limited number you need to be frugal using them. Large enemies in this mode are slower and attack less. The normal enemies aren't as smart and don't have unpredictable shots, as they do in the real game. The down side is that a major part of the gameplay is also not available in this mode.

To complete the game properly you have to collect a set of magic crystals and these aren't available in the trainer mode. To collect the crystals you need to keep them up in the air by shooting them, and by shooting them you need to manoeuvre them into one of the flying baskets that appear from time to time. This is a very difficult task and you'll need lots of practice to manage it.

The bonus is that some special weapon power ups are available to help you play in the full game mode.

BELLS AND WHISTLES

Happy clouds are the key to the game as a happy cloud may contain a bell when you shoot it. When a bell comes out, it will bounce out of the cloud and then start falling to the bottom of the screen.

By default, when they come out they will be golden bells. These bells can be collected by moving over them and they will give you extra points. However, if you

KEYS AND BELLS

In the documents for the game, the Fire and Bomb buttons for the keyboard mode are incorrectly mixed up. These are the correct keys.

CURSOR KEYS – Directional controls for keyboard mode.
LEFT-ALT – Fire (keyboard mode).
LEFT-AMIGA – Throw bomb (keyboard mode).
SPACE BAR – Throw bomb (joystick mode – also fire button 2).

Gold bells – Points.
Blue bells – Speed up.
Green bells – Power up.
Red bells – Extra firebeam.
White bells – Temporary shield.
Black bells – Damage to arms; removes ability to throw bombs.

keep shooting them they'll change to a different colour. There's no guarantee what colour they'll change to, but different colours offer different rewards.

If you can manage it with all the waves of enemies coming down then you can keep on firing at bells to keep changing their colour. Every time you hit one, it'll be knocked back up the screen and will start to fall back down after it reaches its zenith. It's easy to get caught by a stray shot when you're tied up trying to collect a bell, so be very careful.

When you shoot a bell you also knock it to one side, so if you hit it left of centre it goes right and up, and if you hit it on the right side it goes left and up. To keep the bell from flying off the side of the screen you need to hit the bell on one side and then the other. The closer you get to the side of the screen, the more difficult it is to bring it back to the centre.

The story behind this ace shoot-em-up can be found in the introduction.



BOMBING FRUIT

You can also keep knocking bells until you come across one of the flying baskets. If you knock 10 bells of one colour into a basket you'll get an extra life (but not in the trainer mode). A flying basket appears when a single enemy wave is shot down while a smiling cloud is still on the screen.

As well as the flying basket, there is also a flying ambulance which appears from time to time and can give you back your arms for throwing bombs if you've lost them. The bombs that you throw don't damage the flying enemy waves. Instead, they explode on the floor below, a little way ahead of you.

From time to time you'll see some animated little fellows on the floor, sometimes fruit, sometimes small rodents. As enemies of the people, they deserve to be bombed, and if you hit them you'll be rewarded with many extra points and a collectable piece of fruit that will also give you points.

These pests are secondary and you can fly safely over the top of them so concentrate on the flying enemies who can harm you. If you do get the chance though, bomb the fruit and veg.

The documentation for this new demo says that the full game will be published soon, and the review appears in this issue. In the meantime, get in training with our coverdisk.



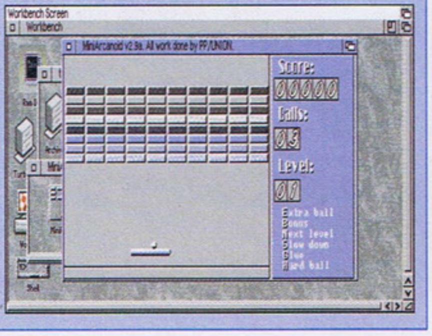
WORKBENCH ARCANOID

This game requires unpacking to be played and can only be played through Workbench. To load it, boot the Serious coverdisk – while the archive for the game is stored on the games disk, the serious disk has the script to unpack it. The disk can do everything automatically for you. All you need is a spare floppy or the name of the hard drive directory you want to install to. When the game is unpacked, you need to load it from Workbench.

***Workbench Arcanoid* is simple enough. You control the panel through the mouse and need to knock through all the bricks with the ball, without letting it drop off the bottom of the screen. Some bricks drop special letters which will help you complete the level. The letters are:**

E – Extra life.
B – Bonus 50 points.
N – Jump to next level.
S – Slow ball.
G – Glue ball to bat when it touches.
H – Hardball, which smashes through balls rather than bouncing off when it destroys one.

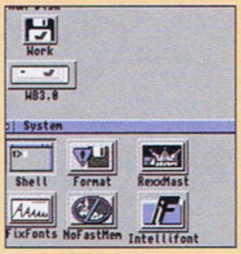
Different coloured bricks are worth different points and you get an extra life for every 2,000 points. The documentation provides details of all the options and the many features.



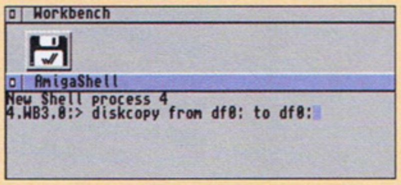
The bricks of doom are back. Knock your way to freedom with this Workbench version of the popular *Breakout* clone.

BACKING UP YOUR COVERDISK

Copying your Coverdisk is really very simple. Just follow the stages below...

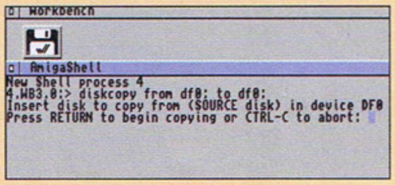


1 Boot up with your Workbench disk and find the Shell icon, in your system drawer. Double-click on this to go into the Shell.

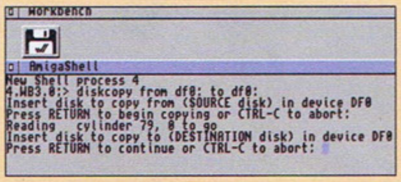


2 Type in the following line (with a zero, not the letter O), taking care to put the spaces in the correct places:

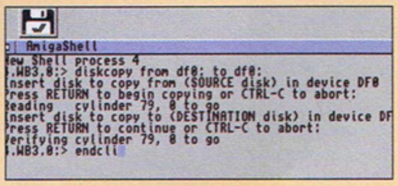
DISKCOPY FROM DF0: TO DF0:



3 When asked for the Source disk, insert your write-protected Coverdisk and press Return. All of the info on this disk will then be copied from the disk into memory.



4 Once your Amiga has read the info, it will ask for the Destination disk. Insert it and press Return. All information on this disk will be destroyed.



5 On an unexpanded machine, the Amiga may ask for the source disk again, because it copies in chunks. Finally, type endcli to close down the Shell.

DISK NOT WORKING?

We take every care to test the Coverdisk software, but Future Publishing cannot accept any responsibility for any damage occurring during its use. If your disk is faulty, send it back, with 2x26p stamps and an SAE to:

***Amiga Format* (insert name of disk)**
TIB PLC • TIB House
11 Edward Street
Bradford • BD4 7BH

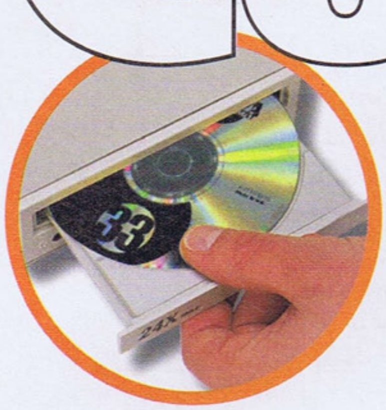
If there is a manufacturing error then the stamps will be returned with a replacement disk.

• New Virus Z • Plextor FlashROM • New



Cover disc

AMIGA FORMAT



AFCD33 is here! Of course, you already knew that because it was weighing down the cover of your mag. "Doh!" says Ben Vost, your host.

WHAT'S NEW?

What indeed? The main difference is that we've got rid of even more of the non-essential stuff. Our System drawer now weighs in at less that 50Mb, meaning that we have more room than ever for stuff you want on our CD, without compromising the tools you use on it.

If you've been suffering with problems with *AFCDView* since *AFCD30*, they should be cleared up now. No-one told us about them, but apparently at least one of you informed Oliver Roberts (the author of *AFCDView*, *Prefs* and *Find*) that they were having problems and he found and fixed the bug that caused them. Nice work Oliver!

This CD should be produced by TIB, the same people who duplicate our floppy disks every issue. Hopefully this will resolve the problems which a very small minority of users have been getting with recent *AFCDs*.

It has also been found that getting a faster (newer) CD-ROM drive fixes the problems with those discs, so that might be worth considering. We'll be keeping a close eye on what goes on with our new CD duplicators, so please get in touch if you still have any problems.

There's plenty for you on this CD. Not only have we reduced the amount of system files to an all-time low of less than 7.5%, we've also got one of the biggest ReaderStuff directories in the history of the *AFCD*. We've got lots of other goodies for you too, so we'll start slowly and build up the pace later on…

JUMP AND RUN FUN

-ScreenPlay-/Shareware/FaYoh2

Let's start lightheartedly with *FaYoh 2*. It's a jump and run game, one of many to grace our dear platform (so to speak), but it's so nicely executed that it blows its many competitors away.

Unfortunately, it's written in *Amos*, but fortunately we now have a new amos.library on our CD that should make these programs a little less prone to falling over on the more powerful machines that we all have these days.

This is only a demo of the second *FaYoh* game, so you can only go through the doors without a padlock (by pulling down on the joystick).

DIGICAM EFFECT

-Seriously_Amiga-/-Commercial-/AE2_DC20

If you have *Art Effect* and the Kodak DC20 digicam, you'll be pleased to find this plug-in which allows you to simply download your pictures inside *AE*. Just

ADD-ONS FOR QUAKE

-ScreenPlay-/OtherStuff/QuakeStuff/

We've had some feedback from you over the last couple of months about our *Quake* add-ons, and the overriding concern is that you aren't sure of how to set them up.

We get people asking what Zip files are and what they should do with them and the like. Right. This is where you start learning…

1 All the *Quake* add-ons we have on the CD are ready to run (pretty much). They're already unpacked, so you won't need to use a Zip program in order to unpack them any further.

2 To get them to work, all you need to do is copy the whole directory into your *Quake* directory by dragging it from the CD into the place where you keep *Quake* on your hard drive.

3 The next step is possibly the hardest. You may need to run *Quake* from the Shell with the name of the dir as an argument. If the dir you've copied from the CD is called "extra", this is what you have to type: Quake -game extra.







Quake add-ons are easy to use, if you know how to. Here's the gorgeous *Demon King* conversion.

Alternatively, you might have to create a script file that allows you to run this command by double clicking on an icon. We've run tutorials on this before, but here's the low-down again.

Start by running your favourite text editor or word processor. Copy the statement I've given above into it and save the file. If you're using a word processor, make sure you save the file as plain text or ASCII, otherwise it won't be usable as a script. Then you need to give this file an icon if it doesn't already have one.

This icon should be a project icon (if you've got an icon that you like, but it isn't a project icon, use *SwazInfo* from the +System+/tools drawer) and you have to give it a default tool of "IconX". Now when you double click on this icon, it's the same as using the Shell, cd'ing to the dir the IconX script is in and typing the commands in the script.

Napalm demo • Foundation update • **Fast Quake patch** • New FreeCiv • **New ViNCEd** •

Your Stuff!

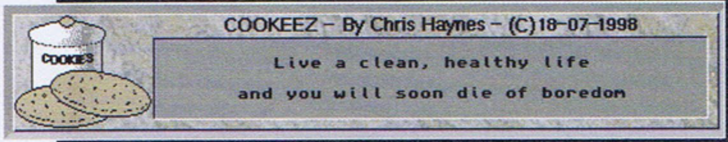
£50 AF Winner!

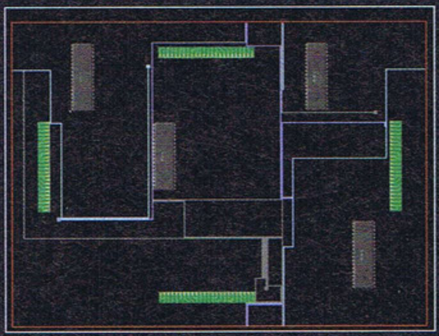
We've got more of your contributions on this CD than almost any other category on the disc! There's a great deal to get through, so this is going to have to be fast. Ready? Here we go: Daniel Pimley's given us a very well-executed light cycles game that scores top marks for programming but bottom marks for originality, even though you can play it with four people at the same time.

Neil Bullock's given us a whole range of his programming output. Although a lot of them are written in *Amos*, they're still worth a go, with the possible exception of *10Minutes* which I double clicked on out of interest. Nothing seemed to happen, so I then read the docs which said that you ought to stop using your computer for ten minutes in every hour.

Fifty or so minutes later, I couldn't do anything with my machine because a new screen appeared to tell me to take a break! Sheesh, as though I wasn't busy enough already, now I have to take one sixth of my day off! Sam Webb has given us *Amithyst*, a web-based magazine for Amigans and horror/sci-fi fans, although there seemed to be more of the former than the latter. He's also done some Games Workshop templates in *Wordworth* for all you tabletop gamers.



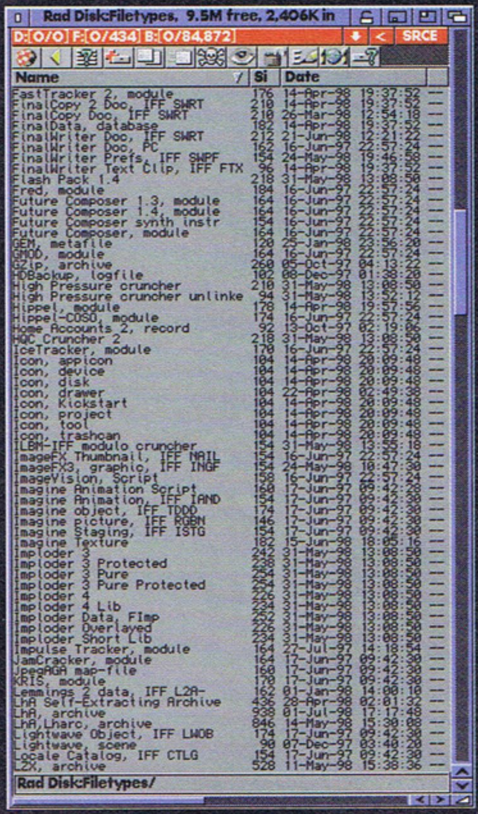




Two of the nearly-wons – *Cookeez* by Chris Haynes and *Light* by Daniel Pimley.

Stephen Morley's given us a new *Amos* calculator. It might be very impressive, but we couldn't look at it because he's only supplied the source. Chris Haynes has sent us a variety of stuff, including two cookie programs, one of which is very anti-Microsoft... Luke Stowe has sent in some *South Park* victims for Simon Hitchen's (it's H-I-T-C-H-E-N, not Gadge, Luke) *Revenge AGA* game. Phillip Bonner, an Australian reader, has sent us his very own *Spirograph* program which is very nice. Even though it was written in *Amos* and nearly won, as Connor McLeod might say, "There can only be one," and the "one" this issue has to be Richard Lane for *MagnumOpus*. And a magnum opus it certainly is.

For those of you with the current version of *Directory Opus*, you may already be using Richard's work from previous *AFCDs*, or even from floppies. It consists of a set of well thought-out FileTypes and something of a guide about how *DOpus* works, along with FileType, disk and other miscellaneous icons for you to use.



Just look at the number of FileTypes Richard Lane has supplied for *Directory Opus* fans!

Richard's put an awful lot of work into this and rightly deserves the fifty quid that will be winging its way to him shortly.

Finally, DJ Nick in the Gallery has created a very impressive .mpg animation with music to match. It's brilliant, but unfortunately there isn't an Amiga around at the moment that can play it properly. Now, he created the frames and the music on his Amiga, but this may be the first time we've given a prize to someone whose work won't work on an Amiga!

To be able to play it back at a reasonable speed, you'll need a spit, spit, PC or Mac that is capable of playing large .mpgs...

clickBOOM supply a variety of scripts that you could modify instead of creating a new one from scratch, if you so desire.



Minion converts your copy of *Quake* into something closely resembling *Archon*.

4 Some of the directories we have in the QuakeStuff drawer are only extra levels for total conversions like *Team Fortress* or *Special Forces*. Make sure you read the readme file in these directories as it will tell you where to put the files contained therein. That's it! There are several total or partial conversions in the QuakeStuff drawer for you this month, including the aforementioned *Special Forces* and *Team Fortress* multiplayer game. Have fun!



Special Forces is a Goldeneye-style game.

bung the program in this drawer into your plug-ins drawer in the *Art Effect* directory and away you go.

MPEG GIVES YOU WINGS

-Seriously_Amiga-/Sound/Pegase_10

MP3 is all the rage these days, but there are people who think that encoding audio tracks is only feasible with big PCs and expensive software. Nothing could be further from the truth.

Didier Levet's *Pegase* program is not only a good .mpg encoder, but it's dead easy to use too. Just double click on the

Continued overleaf ➡

At your fingertips

HD INSTALLERS GALORE!

-ScreenPlay-/HD_Installers

We've got a huge collection of the latest HD installers on this issue's CD for you, with nearly 200 of the WHD hard drive installers for all sorts of games.

CINEMA4D FIX

-In_the_Mag-/CU_C4D

On their very last CD, *CU Amiga* offered their readers *Cinema 4D v4*. Unfortunately, they got the installer script wrong and they didn't print the serial numbers in their mag (doh!).

We've got an updated installer on our CD, but you'll still need to call HiSoft (01525 718181) in order to get the registration number.

PPC ARCHIVERS

-Seriously_Amiga-/Archivers

We've got quite a few archivers (or de-archivers) that take advantage of the PPC's enhanced speed in order to help with crunching operations. Along with the more common LZX, DMS and TGZ, there are also a few that probably won't get used much, like ACE, ARJ and ZOO.

EASIER INDEX

-Seriously_Amiga-/Comms/Other/AminetIdx

If you use the Aminet Index file we have on our CD every month, you'll know that it can be a bit of a pain to search through. This little *MUI* program gives you a much better front end for searching and will give you an ASCII text file with your selections for downloading.

⬅ icon that suits your processor, point it at an appropriate 16-bit sound sample (it automatically recognises and processes AIFF, MAUD, CDDA and even WAV files) and leave it to it.

At the moment, *Pegase* can only encode Layer 2 files, not the more famous Layer 3 variant, but these are pretty good quality anyway and can be played by all the Amiga MP3 players like *AMP*, *Mpega* and *Sound Player*.

Not only that, but it reduces the storage requirements from about 40Mb for a four minute track to approximately 4Mb, at a quality level almost indistinguishable from the CD original.

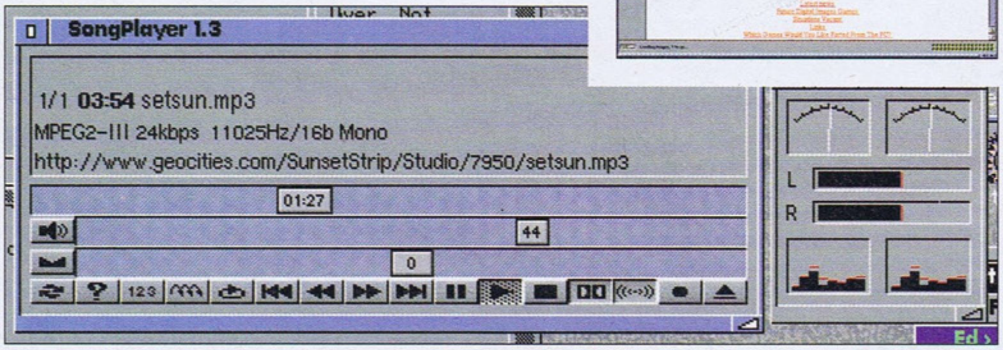
It's not a real-time procedure, but on a 50MHz '060 you can encode that track in about twelve and a half minutes. Best of all, it doesn't tie up your processor completely, allowing you to multitask as you go.

WEBSITE BONANZA!

Ben_Speaks!

New websites on the CD this month include Digital Images, the makers of *Space Station 3000*, and the website for the Amiga Games Database. This is a collection of game reviews from Amiga users all over the world, including a few celebrity reviews from David Braben, Paul Burkey and more. There are also updates of the pages from HiSoft, Amiga Flame, GoiGoi and others. AF





Websites and .mpg players – they're all here on *AFCD33*!

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Your *AFCD* should only need replacing if the CD itself cannot be read. If, instead, you are experiencing problems with an individual application, phone our technical support line.

This is open between the hours of 2pm and 5pm every Tuesday.

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Email: amformat@futurenet.co.uk

(Please remember to put "Coverdisc" in the subject line.)

Please note that the helpline staff provide assistance with technical problems directly related to the CD and cannot provide training on the software or hardware in general.

We want your work!

You can either send it to us on floppies, Zip disks or CDs (we do take other media formats too). If you are going to send us a multiple floppy backup of your work, please use the version of *ABackup* we supply on the CD in the +System+/Tools/Disk_Tools drawer. We'll return any Zips you send us, so don't worry about getting your disks back.

If you have any further queries about how to send your software in then consult the Submissions Advice on the CD (in Ben_Speaks!, or in the ReaderStuff or +System+/Info drawers).

Your signature: ....

Files you send in this month will probably appear on *AFCD35 – Amiga Format* issue 119, January.

Please tell us:

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AF 117 – DEC 1998

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If you want to speak to us about a technical problem, we have a reader call day on Tuesdays. Call us on (01225) 442244 (10am–1pm, 2pm–5pm only). We're sorry, but we can't give games tips over the phone.

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It's Christmas time, there's no need to be afraid – in fact there's plenty to be happy about with our round of Christmas bargains!

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Reviews of:
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AMIGA FORMAT

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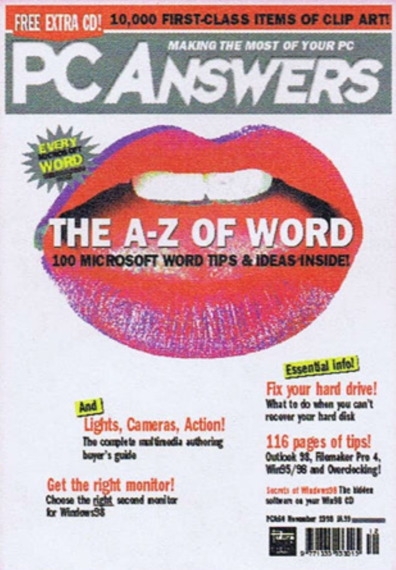
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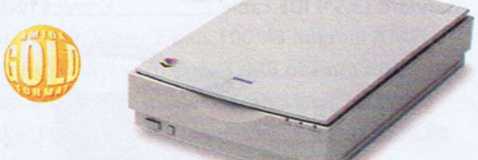
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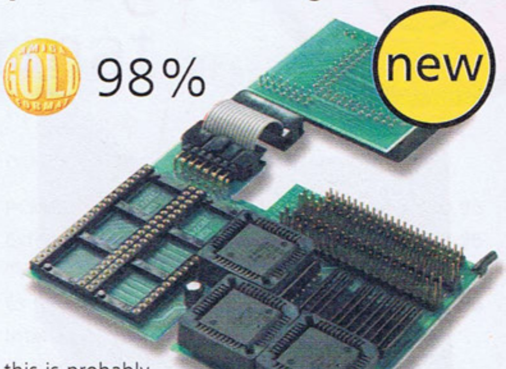
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(includes external case, cables, Squirrel SCSI interface with software and 2 CD titles)



All external cd-rom drives come with a psu, 3 software titles and cables

hard drives

2.5" 260MB IDE including IDE cable and install disk £39.95

2.5" 1.3GB IDE including IDE cable and install disk £109.95

3.5" 2.5GB IDE including IDE cable and install disk £99.95

3.5" 3.2GB IDE including IDE cable and install disk £129.95

3.5" 5.1GB IDE including IDE cable and install disk £159.95

3.5" 6.4GB IDE including IDE cable and install disk £174.95

(5.1 and 6.4GB HD are supported automatically by the PowerFlyer or by IDEfix 97 using the patch provided)

(an updated FileSystem is available on WWW.amiga.de)

Please note that cables included with 3.5"HD have standard 40pin headers

If you need to connect a 3.5" HD directly to the A1200 motherboard, you will need a special "stack" cable 44 high density (2.5") to 40 standard (3.5") IDE cable £12.95



LS120

LS120 120MB Internal ATAPI including 4 w. buffered i/f, Idefix97 software, IDE cable and 1cartridge £99.95

LS120 120MB Internal ATAPI (bare unit only) £69.95

LS120 120MB External ATAPI including 4 w. buffered i/f, Idefix97 software, IDE cable and 1 cartridge £139.95

LS120 cartridge £9.95



iomega zip

Zip 100MB external SCSI including Amiga Zip tools, cable and 1 cartridge (requires Squirrel or any SCSI interface) £139.95

Zip 100MB internal ATAPI including 4 w. buffered i/f, Idefix97 software, IDE cable and 1 cartridge £119.95

Zip 100MB internal ATAPI (bare unit only) £75.95

Zip cartridge £12.95



floppy drives

A500/A600/A1200 Internal Drive £34.95

A2000 Internal Drive £39.95

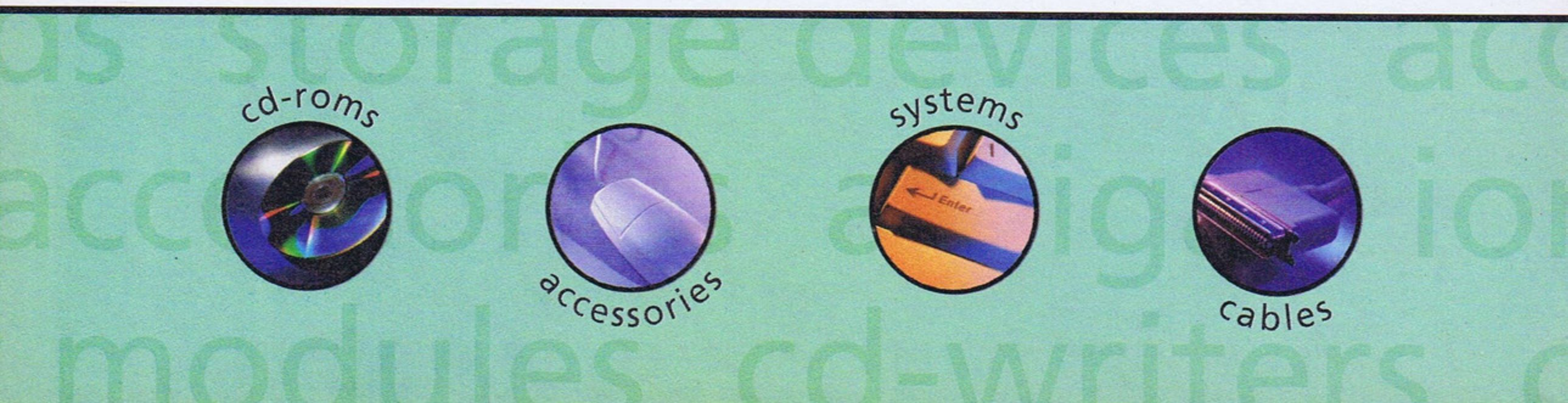
PC880E External for all Amiga models £39.95

XL 1.76MB External for all Amiga models £65.95

XL 1.76MB Internal for A4000 £60.95

video backup

Video backup SCART backup 520MB on a 4h tape £20



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power tower

97% amiga format



monitor, speakers, mouse and keyboard not included, see power tower specs

£129.95

power tower for a1200

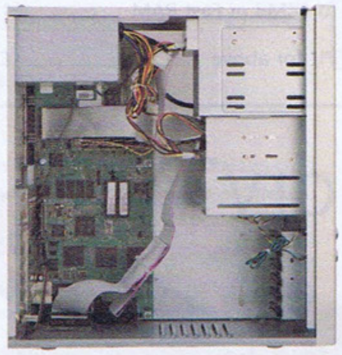
Power Tower £129.95

Power Tower 1
Power Tower plus A1200 motherboard, mouse and Amiga original keyboard £269.95

Power Tower 2
as in Power Tower 1 plus Typhoon A1230 with 8MB RAM and SCSI controller, 2.1MB Hard Disk, 32x CD-ROM drive and 4 way IDE buffered interface with IDEfix 97 software £559.95

Power Tower 3
as in Power Tower 2 plus 100MB Internal ATAPI Zip drive and 1 cartridge, 32MB of extra RAM (total 40MB of Fast RAM), Scan Magic including Flicker Fixer 15" SVGA monitor £899.95

All Power Tower Bundles (excluding the bare Power Tower) include 3 pieces of software



operating system

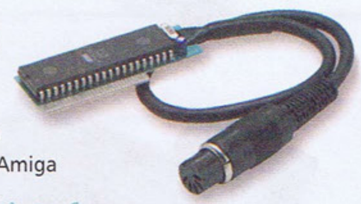
Amiga 3.1 OS for A1200/A3000/A4000 including full disk set and manuals £45.95

Amiga 3.1 OS for A500/A600/A2000 including full disk set and manuals £39.95

Amiga 3.1 OS for A1200/A3000/A4000 (chips only) £29.95

Amiga 3.1 OS for A500/A600/A2000 (chips only) £25.95

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Works with both PC & Amiga

keyboard interfaces

A1200 k/b interface and A4000 keyboard £39.95
A1200 PC k/b interface and PC keyboard £29.95
A4000/PC keyboard interface only £19.95

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power tower accessories

PCMCIA "V" adaptor £19.95
External audio port £15.95
"Y" cable to mix CD audio to the Amiga audio £9.95
Internal to External SCSI adaptor (Internal 25 pin female connector, Internal 50 pin header External 25 pin male connector) £19.95
SCSI II converter from(PPC) 50 pin high density to 25 D male, including extension cable to the Int/Ext SCSI adaptor £29.95
SCSI converter from 50 pin female Centronic to 50 pin header (for internal connection of SCSI device to squirrel or similar interfaces) £9.95
50 pin male to male Centronic lead £14.95
50 pin female to male Centronic lead £14.95
25 pin D female to 50 pin male Centronic lead £14.95
3 way 50 pin header flat cable (SCSI) £9.95
5 way 50 pin header flat cable (SCSI) £14.95
7 way 50 pin header flat cable (SCSI) £19.95
Ultra WIDE SCSI cable made on request £POA
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Standard 3 way IDE cable (3.5") £6.95
44 high density IDE cable 5cm £4.95
44 high density IDE cable 10cm £7.95
44 high density IDE cable 80cm £14.95
44 high density (2.5") to 40 standard (3.5") IDE cable £12.95
Internal floppy extension cable (34 pins) for Towers £4.95
Parallel Printer cable £12.95
Serial Modem cable £9.95
Internal to External male to female 9 pin D Extension lead for Surf Squirrel Serial Port or similar products £4.95
200 Watt speakers £35.95

amiga 1200 magic pack

A1200 3.1, 2MB 68020, AGA chipset, Wordworth 4.5SE, Turbocalc 3.5, Data store 1.1, Photogenic 1.2SE, Personal Paint 6.4, Organizer 1.1 Pinball Mania and Wizz games £179.95
As above with 260MB Hard Drive fitted £219.95
As above with extra 8MB RAM £259.95

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To resolve lock-up during multi-tasking on Amiga revisions 2b & 1d.x fitted with an accelerator board we will modify it for £19.95, or call us to do it yourself for free.

amiga accelerators cards



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All Phase 5 products available on request (allow 28 days for delivery)

accelerator boards for a500

Viper 520CD, 68020EC 33MHz, without MMU, optional 33MHZ PGA FPU, space for one 2.5"HD, support for up to four IDE/ATAPI devices, 8MB of Fast RAM on board and 3.0 Kickstart Rom including full 3.0 Workbench disk set FAT Agnus slot to fit Mini Mega Chip ____ **£99.95**

Mini Mega chip (2MB Agnus chip and 1MB extra Chip RAM) ____ **£79.95**

accelerator boards for a2000

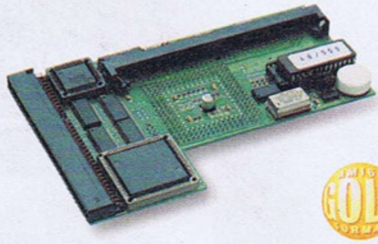
Apollo
full 68030 25MHz with MMU, including FPU, Up to 64MB of Fast RAM ____ **£129.95**

Apollo
full 68030 50MHz with MMU, optional 50MHz FPU, Up to 64MB of Fast RAM ____ **£159.95**

50MHz FPU for above ____ **£29.95**

accelerator boards for a600

Viper 630,
full 68030 33MHz with MMU, including FPU, Up to 32MB of Fast RAM, PCMCIA friendly ____ **£65.95**



accelerator boards for A1200

Viper Mk2, 68030 40MHz, (up to 32MB), full MMU, optional FPU (PLCC 40MHz only) ____ **£69.95**

Viper Mk2, 68030 40MHz, (up to 32MB), full MMU and 33MHz FPU running at 40MHz ____ **£79.95**

Apollo with full 68040 25MHz, up to 64MB ____ **£125.95**

Apollo with full 68040 40MHz, up to 64MB ____ **£185.95**

Apollo with full 68060 50MHz, up to 64MB ____ **£269.95**

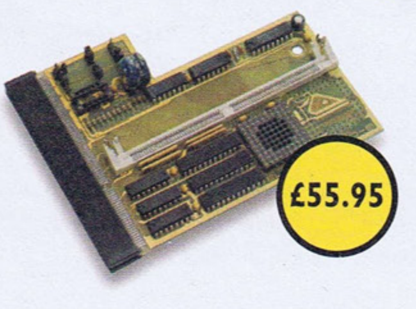
need more memory?

memory modules and fpu

for accelerator and expansion boards

4MB SIMM ____ **£9.95**
8MB SIMM ____ **£15.95**
16MB SIMM ____ **£25.95**
32MB SIMM ____ **£35.95**
32MB SIMM, slim for Blizzard 1260 accelerator boards ____ **£59.95**
64MB SIMM ____ **£139.95**
1MB ZIP RAM static column for A3000 ____ **£16.95**
GVP custom 4MB RAM module ____ **£49.95**
GVP custom 16MB RAM module ____ **£99.95**
20MHz PLCC FPU ____ **£10**
33MHz PLCC FPU ____ **£15**
40MHz PGA FPU ____ **£20**
50MHz PGA FPU ____ **£29**





memory expansion boards

A1200 4MB not upgradable, with battery backed-up clock ____ **£39.95**

A1200 bare with standard SIMM socket with battery backed-up clock ____ **£39.95**

A1200 with standard 4MB SIMM socket with battery backed-up clock ____ **£45.95**

A1200 with standard 8MB SIMM socket with battery backed-up clock ____ **£55.95**

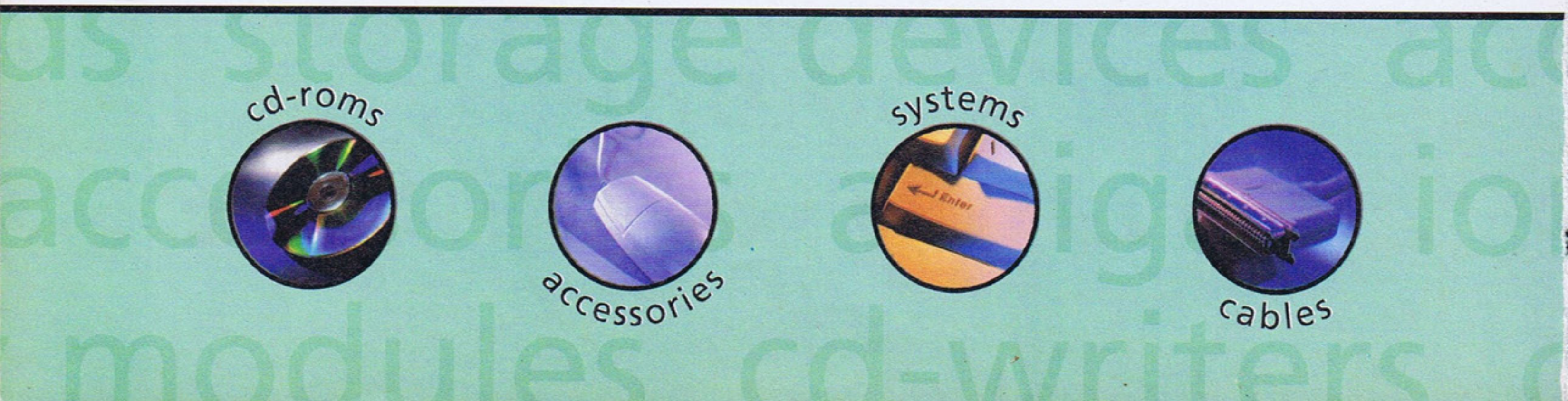
PGA 40MHz FPU for all the above cards ____ **£15.95**

A500 1MB Chip RAM with battery backed-up clock ____ **£19.95**

A600 1MB Chip RAM with battery backed-up clock ____ **£24.95**

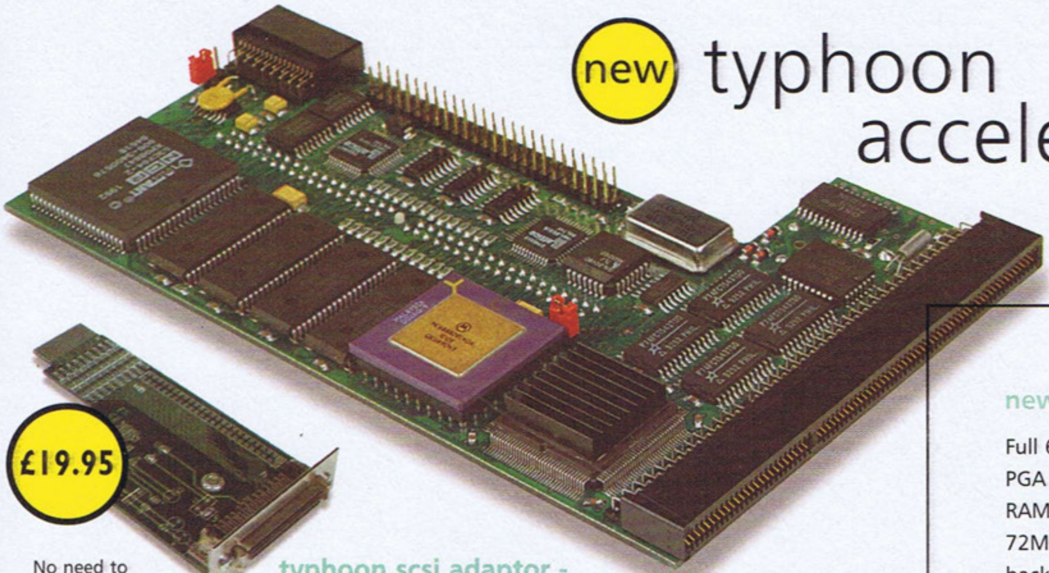
A500 2MB RAM with battery backed-up clock ____ **£49.95**

CDTV 2MB RAM ____ **£49.95**



new

new typhoon accelerator



£19.95

No need to open your Amiga

typhoon scsi adaptor - amiga 1200 desktop

£89.95

new typhoon accelerator board

Full 68030 40MHz with MMU, optional 50MHz PGA FPU, optional SCSI adaptor, 8MB of Fast RAM on board, expandable to extra 64MB (total 72MB) using standard SIMM modules, battery backed up clock, 50 pin SCSI connector on board (suitable for all our Towers) ______ **£89.95**

New Typhoon accelerator board as above, but with SCSI enabled ______ **£99.95**

SCSI adaptor for Typhoon (Amiga 1200 desktop), including software and manual ______ **£19.95**

External SCSI II connector for mounting on standard A1200, including bracket and screw (opening your Amiga is not required) ______ **£19.95**

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digital cameras

VDC-100, 250,000 pixel CCD ______ **£99.95**

VDC-200, 470,000 pixel CCD built-in flash, memory slot ______ **£199.95**

(both includes batteries and Amiga software)
4MB Flash RAM for VDC-200 ______ **£49.95**

50 Alkaline batteries ______ **£25.95**

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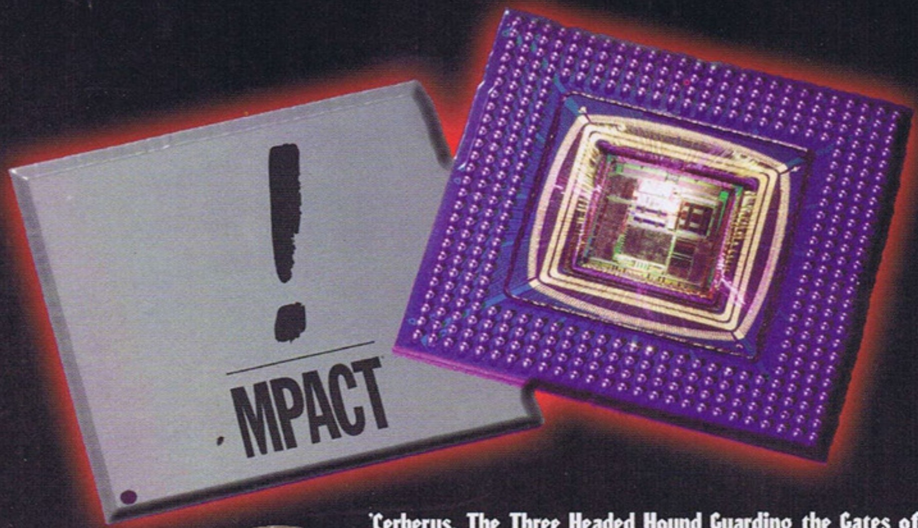
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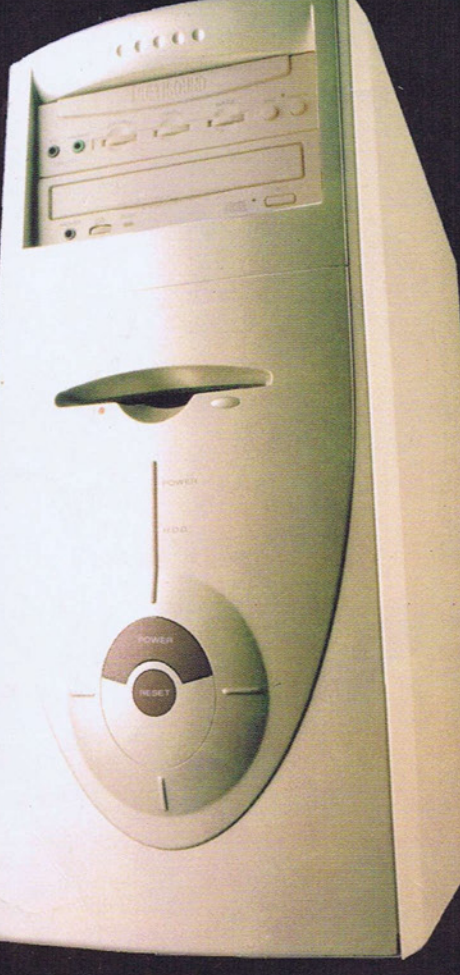
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Basic Specification

Intel Pentium II 300 MHz Main CPU
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3D GFX with 500 MFLOP Engine
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